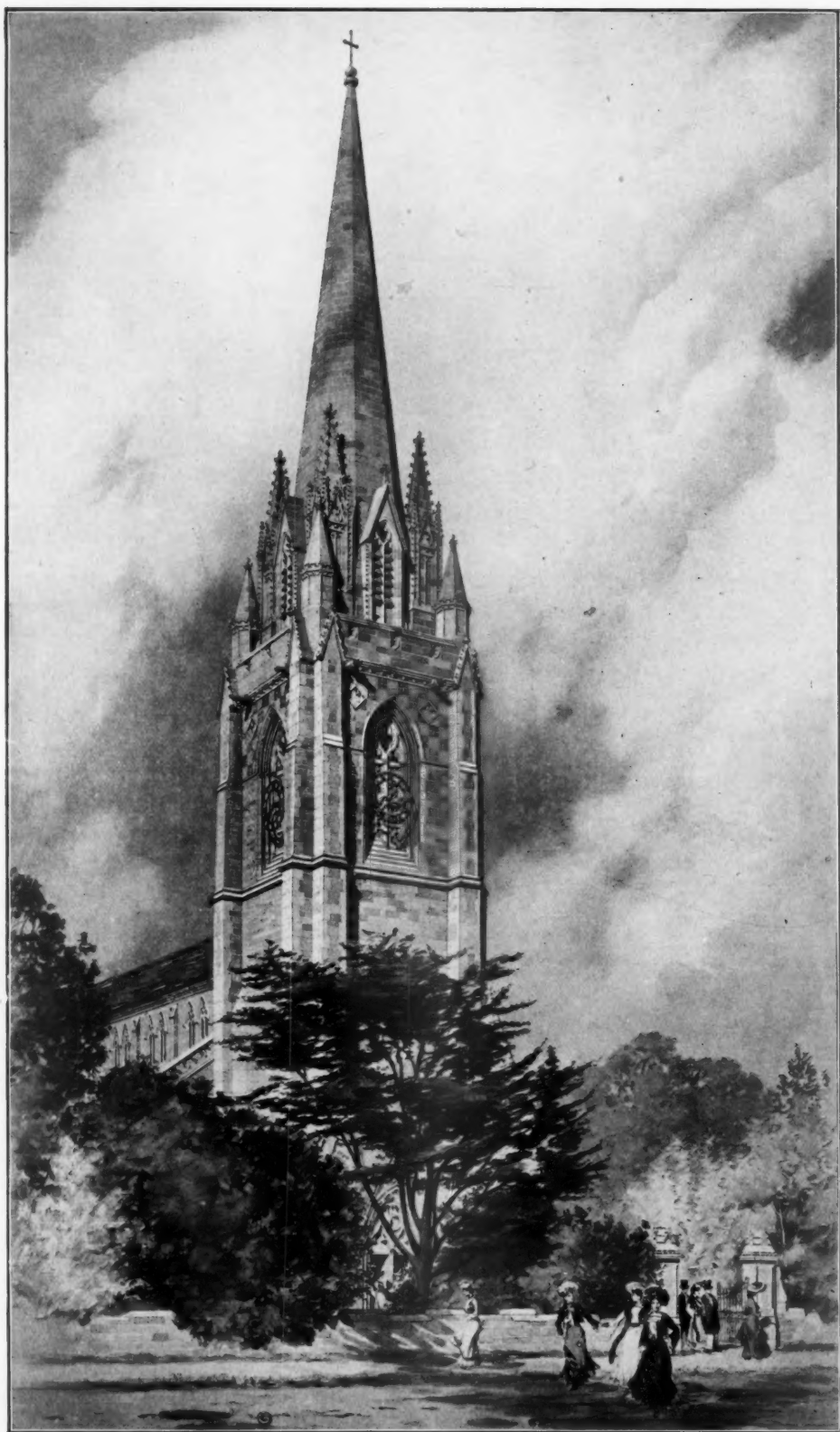


THE ARCHITECTURAL
REVIEW, JUNE,
1906, VOLUME XIX.
NO. 115.



NO. 1594. NEW SPIRE AND UPPER PART OF TOWER, ST. GEORGE'S CHURCH, BICKLEY.
ERNEST NEWTON, ARCHITECT.

Architecture at the Royal Academy,

1906.—II.

My first impression on entering the architectural room was that I had stepped into the jaws of the seventeenth century, and I felt, in consequence, exceedingly shy. A further glance tried to reassure me by showing that it was the early days of the century, when the century was young, and its fangs presumably only budding. Eventually I got past the illusions of the time-element, to find myself, by another set, transported to a kind of confectionery department where specimens of the triumphs in bride and festival cakes were being made with an undercurrent of the more homely plum bread and some phantasies in puff pastry. On the dim shelves at the back of the establishment of my fancy were kept vials of distilled essences, labelled with the famous names of past master-builders in Italy and France—post Raphael and post Michael Angelo, so far as I could read, with Wren, Vanbrugh, and Hawksmoor fairly handy to the fore. The essences I discerned were drawn upon for the more important confections by the master-workers whose handicraft was being exhibited, whilst a considerable posse of young workers were using those master-workers' receipts, and even their moulds. I could detect several flavours disseminated by the master-workers—the persistent odour of Scotland Yard, the luscious scent of Colchester Town Hall, and many of the attributes that I am used to accredit to such names as Sir Aston Webb, Mr. H. T. Hare, and Mr. Ernest Newton, reappeared to animate and decorate the cakes of their followers. There were half a dozen wonder-pieces in festival confectionery that to the ordinary uninformed eye meant designs for an opera house; the catalogue said that these were designs for the New Wesleyan and Conference Hall at Westminster. Clearly, there are limits to the catalogue's knowledge. There was a good deal, naturally, of the small house in the country, which is felt apparently to be rather small and demure, and which has to be eked out by drawing and colour with garden craft and distant views of the champagne around; and one of some cottage homes in Somersetshire set itself to reproduce in its colour effect, and a good deal in its architecture, the "Haven of Rest" of Fred. Walker. This is carrying modesty—and architecture—into the wrong end of the perspective. Of the Crusader element, the burning conviction and enthusiasm

of the Gothic revival, there is little evidence, excepting a fine riot in lead (odd metal to riot in!) by Sir Chas. Nicholson; the desire for correctness of style, for scholarship in proportion and detail, has tamed the youthful outburst. The investigation of the principles of Gothic architecture was to issue in establishing a basis on which to develop the architecture of the nineteenth century—it resulted in an attempt to construct, as accurately as possible, the work of past ages. Proclaiming as its gospel the faculty and essential property of the spirit of Gothic architecture to represent current modes of thought and habit, and to develop the forms left to us by embodying these newer manifestations, it stiffened gradually in the embrace of scholarship and archæology, and its main aim now seems to be to erect buildings that may pass as well-preserved specimens of the age they pretend to represent. So, too, beneath this chill grip of scholarship the exuberance of the "Queen Anne" (the name was a misnomer, and quite misleading as regards date) style has cooled down, like its prototype did in the days of James I., and like the classic revival of Inigo Jones eventually did under the wisdom of the Earl of Burlington and the dons of his date. I was going to say that our present version of classical orders was already showing signs of exhaustion, but I am at once checked by Mr. Norman Shaw's young, vigorous, and splendid scheme for the treatment of the Quadrant at the foot of Regent Street. It is, to my thinking, the most alive piece of architecture in the room. Set off by most admirable draughtsmanship, the perspective view of the Quadrant is really a wonderful feat in drawing, and the detail elevation a beautiful example of effective presentment; the design itself is a joy to look upon, to ruminate over, and to be devoutly grateful to the Office of Woods that it is really going to be perpetuated in stone. I hope that where the detail differs from the perspective the former is going to prevail, so as to give the arched passage-way to Air Street a more emphatic distinction. I wish that word "proposed" was out of the catalogue as regards No. 1,442. I have said already that I don't believe the catalogue knows what it is talking about, and I trust it is showing its ignorance here. But it is a hope, not any easy confidence, this time. To turn Piccadilly Circus into

Piccadilly Square, to bring shape and order into that present heartbreak of undignified shapeless scramble, is a work of mercy, and the way Mr. Shaw offers to do it seems so easy, so natural, and—for you cannot have an omelette without breaking eggs—not so very expensive. Mr. Shaw himself breaks the first egg, à la Columbus, by showing how it can be done. Can the Office of Woods nerve itself to provide the mere ingredients of space and money, and furnish a permanent feast to the users of its streets? Can it believe that such disposition of spaces, the sense of order and of form, are a real refreshment to the eye and the heart of the passer-by? One can believe much of an office that has so much discernment as it has shown in the matter of the Quadrant.

The King Edward VII. Sanatorium is a pleasant restful-looking place if the admirable coloured drawing fairly represents it; but apart from its charms of draughtsmanship, it has a friendly character and individuality of its own. I rather question the mixture—if I read it right—of green glazed bricks and stone in the Women's Hospital, Soho. You cannot mix perishable with imperishable materials without Time playing you some ugly tricks in the way of contrast. Perhaps it isn't stone but glazed terra-cotta, in which case my objection disappears. The Central Library at Islington (1,420), and the new premises in the Strand (1,427) have a taste of Wren and the gentleman who designed the Quirinal Palace at Rome (I forget his name), but I feel that in these two designs we are marking time rather than advancing. So the new premises, Oxford Street (1,563), by Mr. Belcher, seem to leave us as we were—are the conditions of shop frontage so restrictive as all that? The new Club House in Suffolk Street (1,435) is dignified almost to austerity—the treatment is grave even of the drawing as well as the architecture, and the one piece of fun is the superimposition by the architect of the Oxford shield-of-arms over the Cambridge, although the catalogue, in its helpless way, says it's the United University Club. True, the shields are united—no faith is broken—but the Oxford man will be able to give a dig of gentle malice to his Cantab fellow.

Mr. Stevenson gives us culture in another form—in a Restoration of the Mausoleum (1,436), and he reaches me more effectually with his lonely monument in Largs Cemetery (1,472). Some columns stand wistfully rendering their silent homage to the dead. Between them they display their written testimony, and they have a pathetic air of inviting one to go up and see what they have to say and to render one's tribute also of respect to the lonely occupant. The grave is enhanced by their attention—in their shapely

quietude they invest the tomb with a consequence that one feels really does belong to its occupant; all concerned in the matter have been able to testify to their affection and his memory. So much human feeling and its poetry haunts one. In the discussion over Bartholomew's Hospital it became clear to a layman's mind that the right thing to do was to clear away the hospital to some site farther away from London, and sell the present one to do it with. The wrong course was taken, and the New Buildings (1,469) seem to own up to the unwisdom of the decision. The finish to the new Admiralty Building (1,470) by Sir Aston Webb is broad and dignified—it will interest Sir Horatio Stylites to contemplate his name from the eminence of his pillar. The Chapel at Mirfield (1,485, 1,488) looks gaunt and lean from the outside, and the drawing represents it as desolate as well: inside, the piers with their spiral finish have a restless look, almost as if they were in pain, struggling against the oppression of their load. Three chapels by Sir Chas. Nicholson (1,503), together with the lead flambouancy near by, import a fresh flavour into a district of picture frames that represents what is the vernacular of the moment; but the Epsom Church (1,515) is more than I can stomach—with ease. To me, the several parts remain heterogeneous, I can't resolve them into a natural whole, and the tower seems to disdain the scale of its surroundings and to be at some variance even with itself. The Bournemouth Law Courts (1,524) design has definite architectural qualities. Open on all sides, with spacious roads to fence it off from envious adjacent buildings, it sits firmly on its site, and airs its unusual shape with a distinction easily intelligible and pleasantly marked. It hardly amounts to the grand—so far as I can judge—but it does succeed to the distinguished. A factory at Limehouse (1,557) is a bit of direct design, difficult to do, and done well. High up in the angle of the room is a model of part of Winchester House (1,543), and near by is a detail of the rebuilding of the whole edifice. It is not easy to judge of the model because there isn't enough of it. The order of columns and entablature—one only sees part of the columns—looks small and weak for the broad masses of masonry immediately over them—it is not likely to be the case—but that is the impression the model gave me. These footprints of Hercules make a demand on one's memory as well as one's imagination. There is the Choir Bay of Liverpool Cathedral (1,513) for instance. How does it count in the general mass of the building? It has a fine rugged cliffy look of its own, but I forget what it is all about, what vaults it has to sustain, whether it isn't a choir transept, and how many of them go to the choir. The proposed



NO. 1,461. FOUNTAIN AT THE PARK, MIDDLETON.
EDGAR WOOD, ARCHITECT.

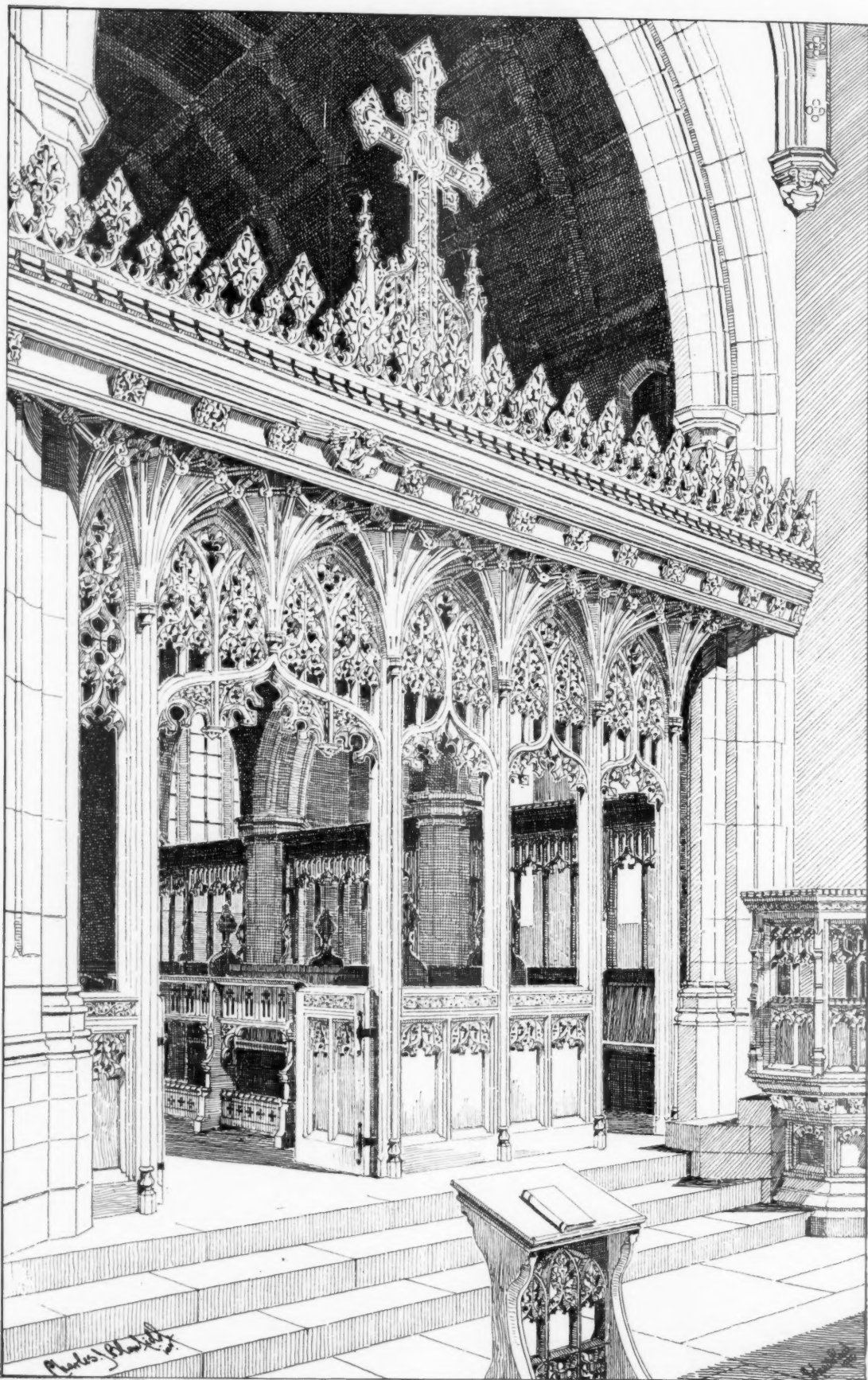
County Hall spanning the Thames (1,541) should be submitted to the authorities in Nephelococcygia, it is too airy and unreal for the gross materialities of Cockaigne. The very colouring gives it away. It is no representation of the Thames, or the city which it divides, and what the water traffic would say to these many arches 'tis better only guessing. Something very gloomy in the mortuary style—possibly a crematorium—was the impression I got from No. 1,549; the catalogue describes it differently, and I am willing to suppose that in this case it knows better. I must take Mr. Jackson's work on trust as regards 1,603 and 1,604: the drawings are hardly sufficient. The interpolation of the new work at Billinge looks very interesting, but I want to see how it's done, more than how it looks. The new structure in Williamson Park,

Lancaster (1,613), has something of the quality of puff paste. "The Earth has bubbles as the Water hath." So they are going to erect a festival pavilion in Lancaster, are they?—in these days when we've lost the power of playing, and are too self-conscious to indulge in any personal pomp or display. Well, it's very good of them to embark in so much romance.

The proposed house at Buenos Ayres (1,614) claims attention. For one thing, it recognises a climate other than ours. In the several proposals for buildings in South Africa I couldn't see any notice taken of this fact. Mr. Prynne's Church for Johannesburg might have been placed in England (perhaps it is, and the catalogue has been tripping again) for all the concern the architecture takes of a spot that is as near to the equator as Cairo. The Monument (1,615) to the Marquess of Dufferin is—so far as the architecture is concerned—a very mild affair, animated by the one disturbing question, has the superstructure sufficient abutment to absorb its thrusts in itself, or won't it some day push over its columns? Of course, the actual size of the affair probably contains the answer to this doubt. Generally speaking, the architecture at the Academy represents a mature period in the history of design; what there is of enthusiasm or of passion is kept within balanced, formal lines. The dome is much in

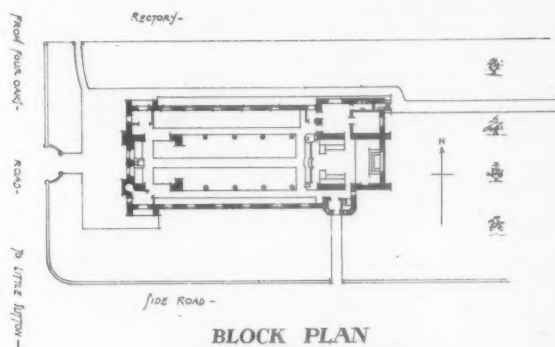
evidence—the dome of the Renaissance, not the dome of the Byzantines. We seem to feel a drowsy afternoon sense of pause in the company of men who in the University of Architecture have taken a good second class; we are men of the world, and a little shy of any outbursts of feeling, and have, alas! too much experience of what may be said on the other side, to go to any quixotic lengths on behalf of our own—not over-assured—convictions. There is safety in correctness, and it may be that this is the most logical and effective way of building up tradition—a tradition based on the calculable requirements of the time, on the definite and accepted response to the problems of the day, and on the learned and sympathetic treatment of the materials employed—a tradition that is now our most crying want.

HALSEY RICARDO.



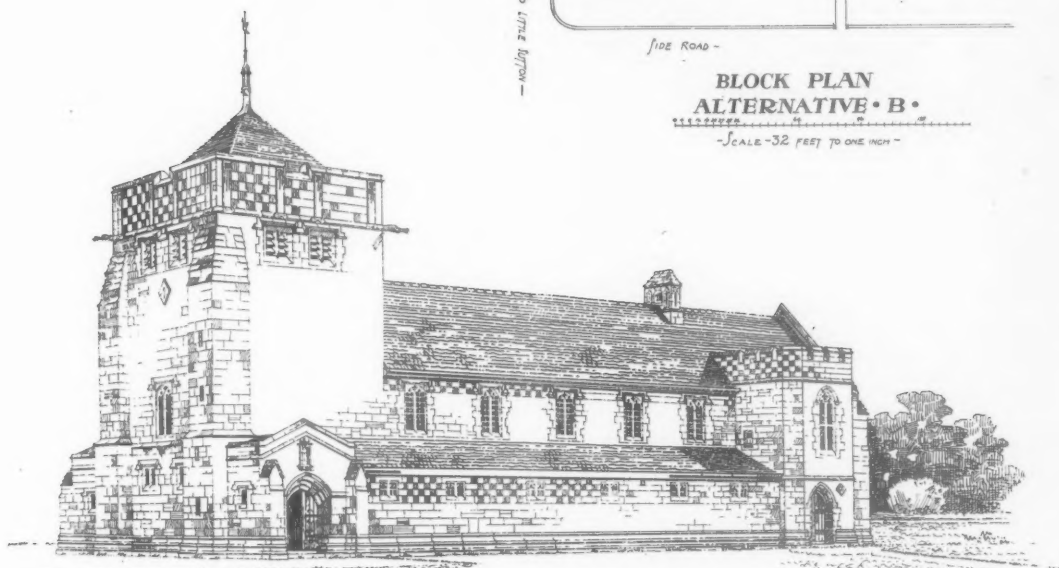
NO. 1561. ROOD SCREEN, ALDENHAM CHURCH, HERT'S.
C. J. BLOMFIELD, ARCHITECT.

HILL CHURCH
SUTTON COLDFIELD



BLOCK PLAN
ALTERNATIVE • B •

SCALE—32 FEET TO ONE INCH—



VIEW FROM SW

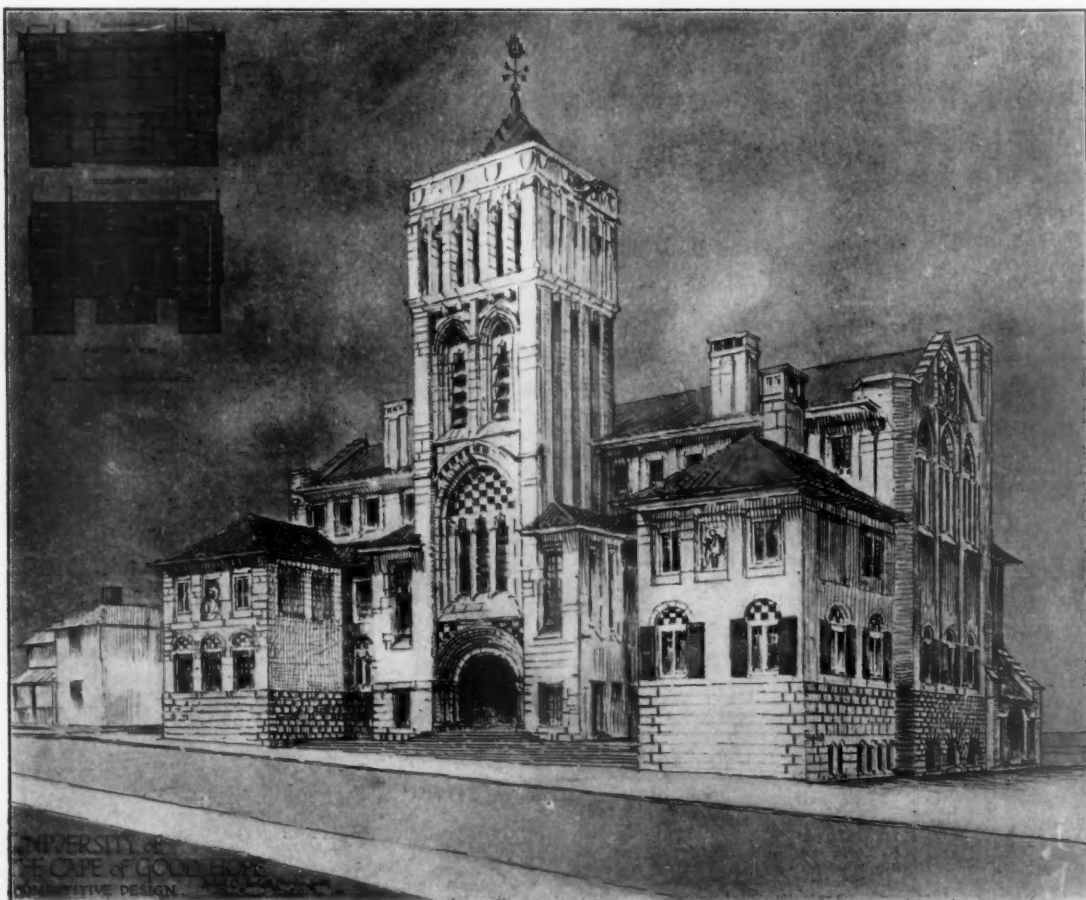
NO. 1518. C. E. BATEMAN, ARCHITECT.



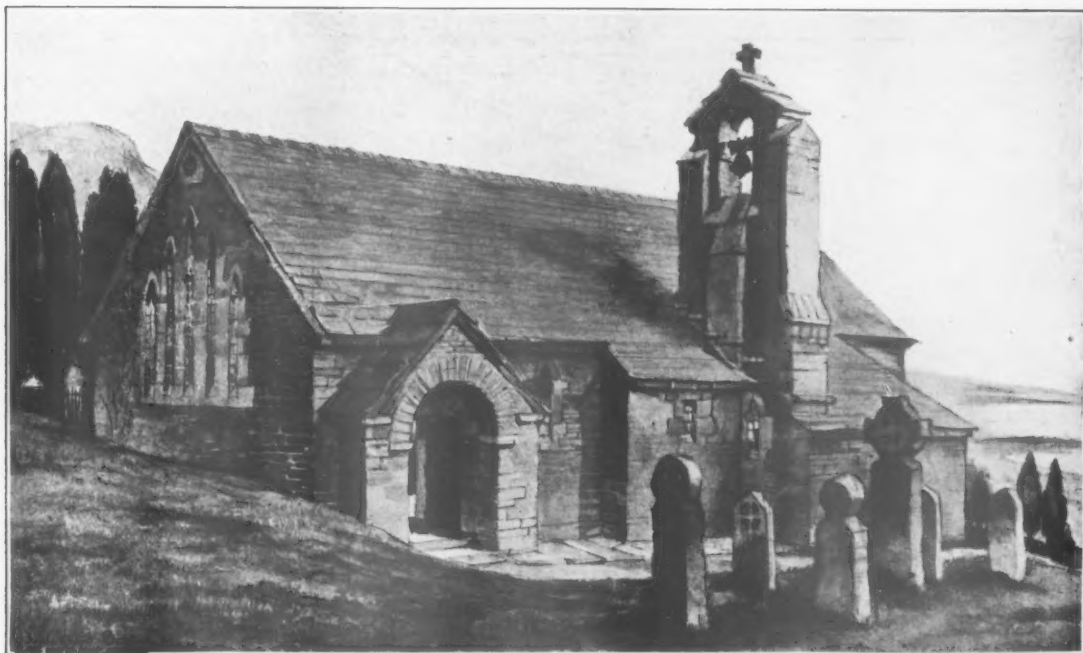
NO. 1502. NEW CHURCH, WELLHALL, KENT.
TEMPLE MOORE, ARCHITECT.



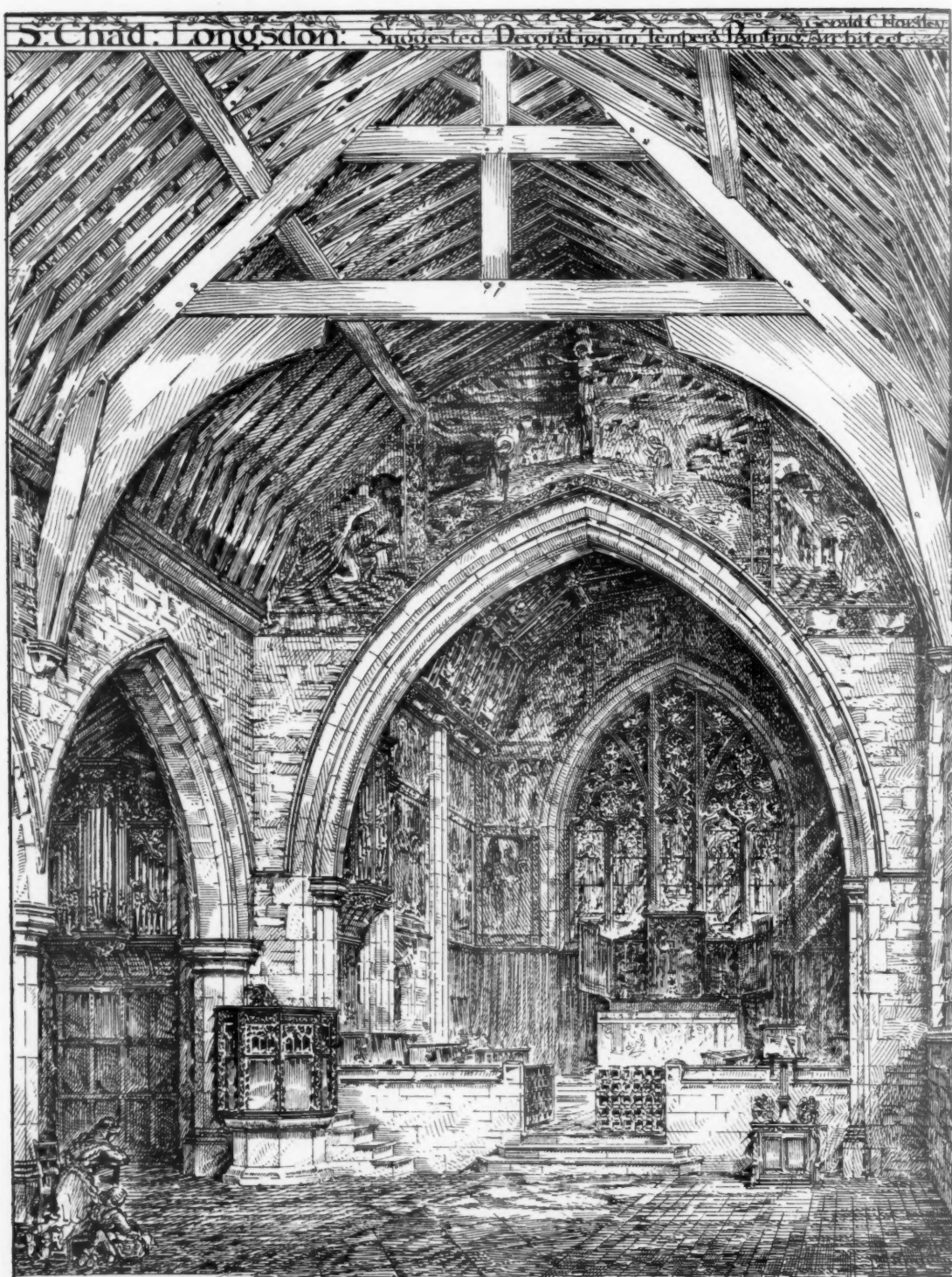
NO. 1452. COTTAGES AT SOUTH MYMMS, HERTS. GEOFFRY LUCAS, ARCHITECT.

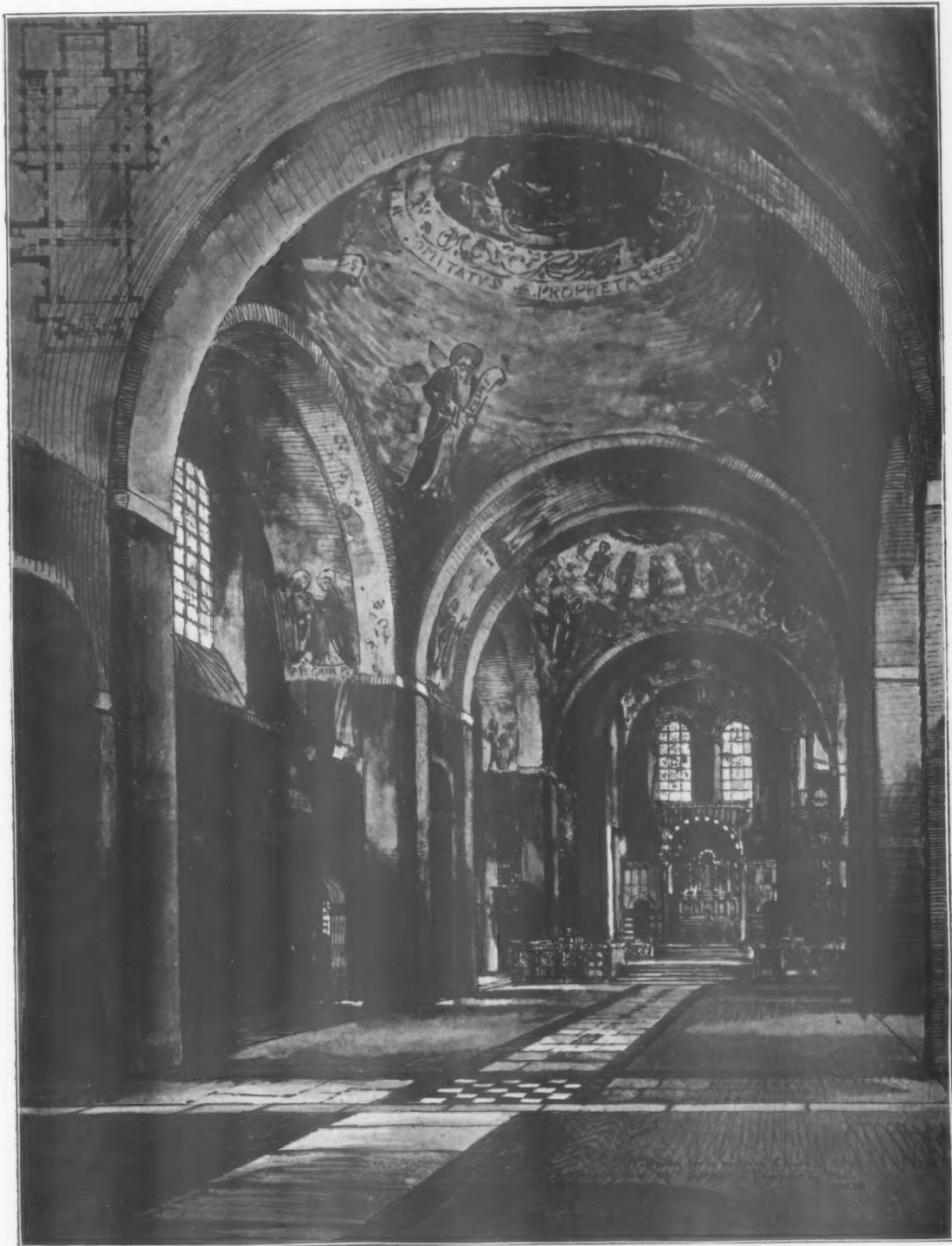


NO. 1552. HUBERT C. CORLETTE, ARCHITECT.

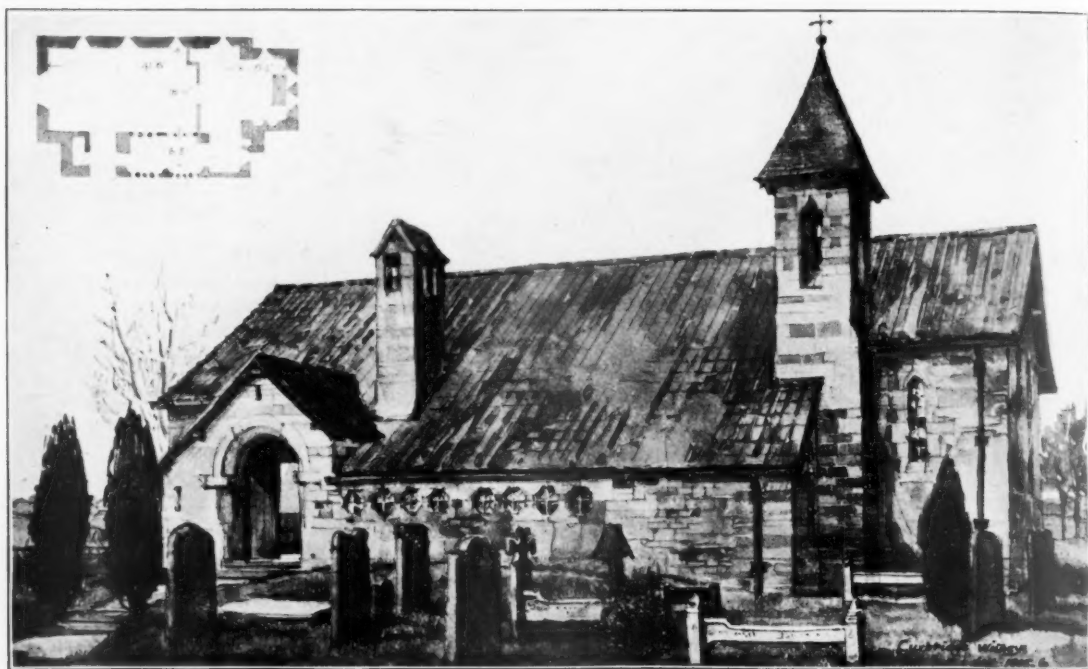


PART OF NO. 1503. ALL SOULS' CHAPEL, BELCLARE, MAYO.
SIR CHARLES A. NICHOLSON, BART., ARCHITECT.





NO. 1534. DESIGN FOR A MODERN CHURCH.
HUBERT C. CORLETT, ARCHITECT.



PART OF NO. 1503. CHAPEL, CURBRIDGE WITNEY.



NO. 1515. NEW PARISH CHURCH, EPSOM.
SIR CHARLES A. NICHOLSON, BART., ARCHITECT.

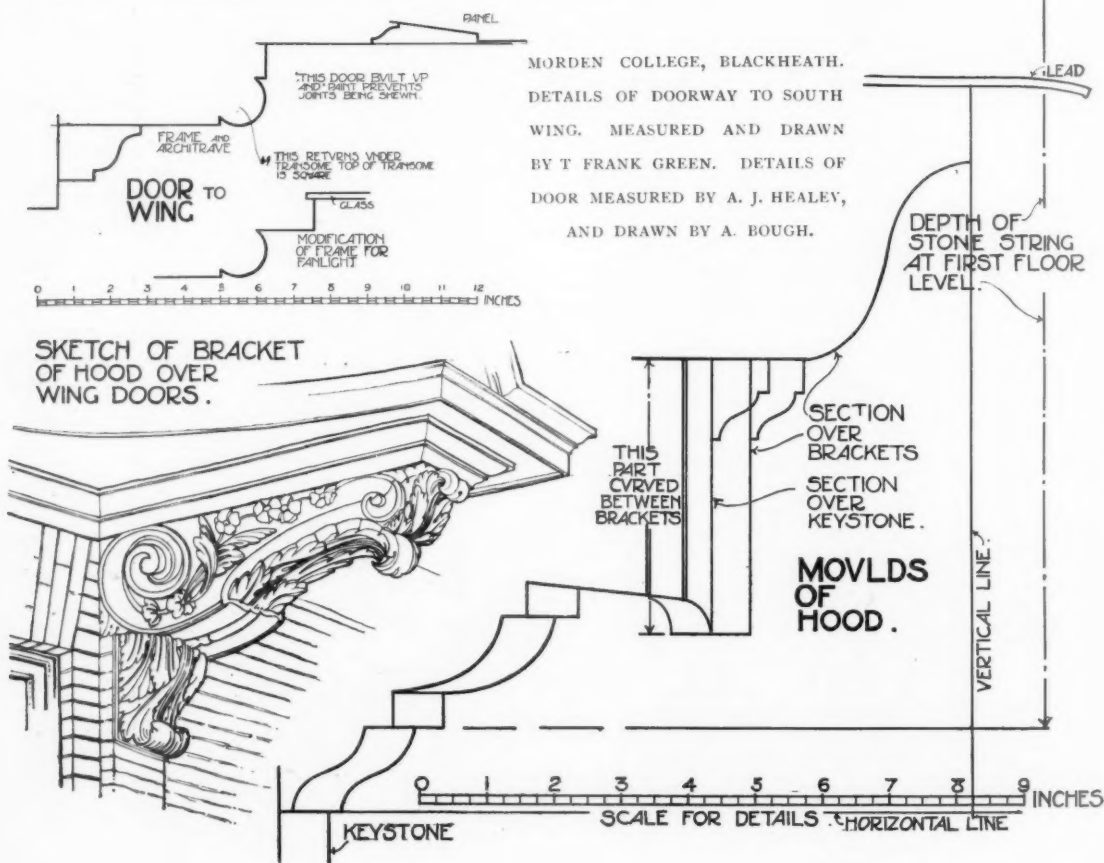
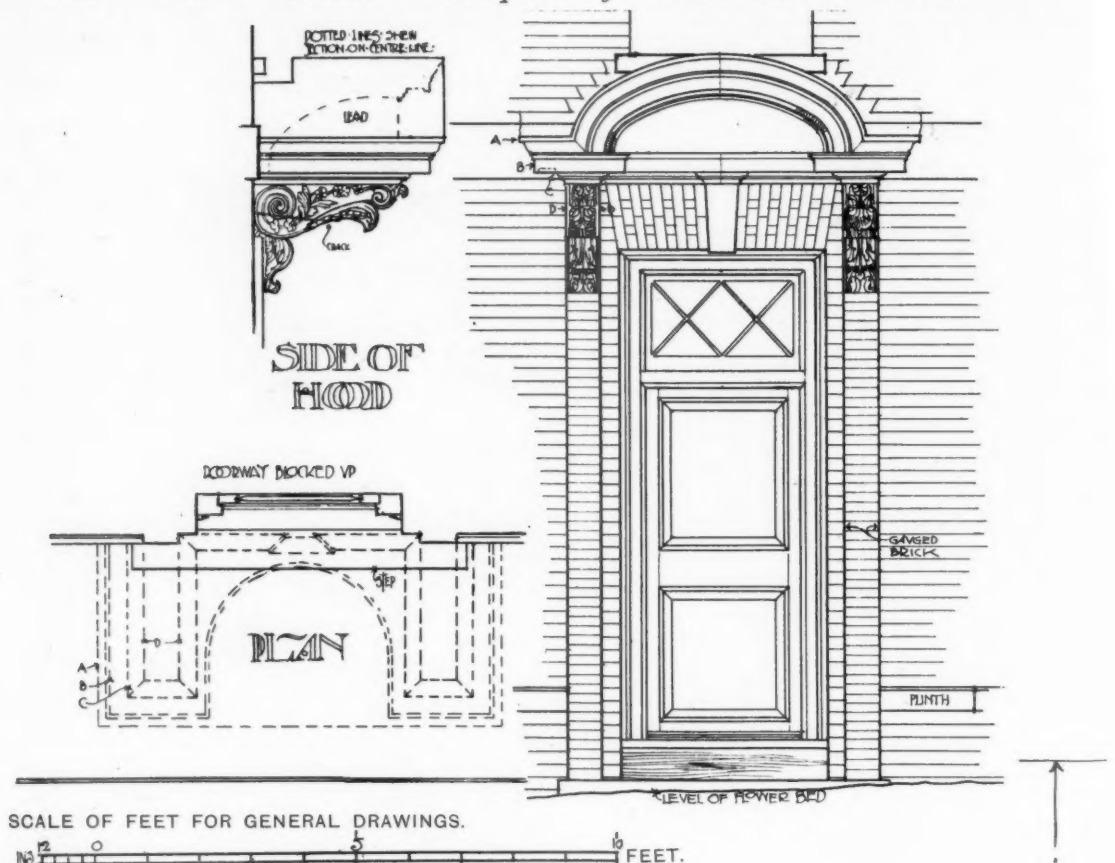
The Practical Exemplar of Architecture.

III.—Doors and Doorways.



MORDEN COLLEGE, BLACKHEATH. DOORWAY TO SOUTH WING.

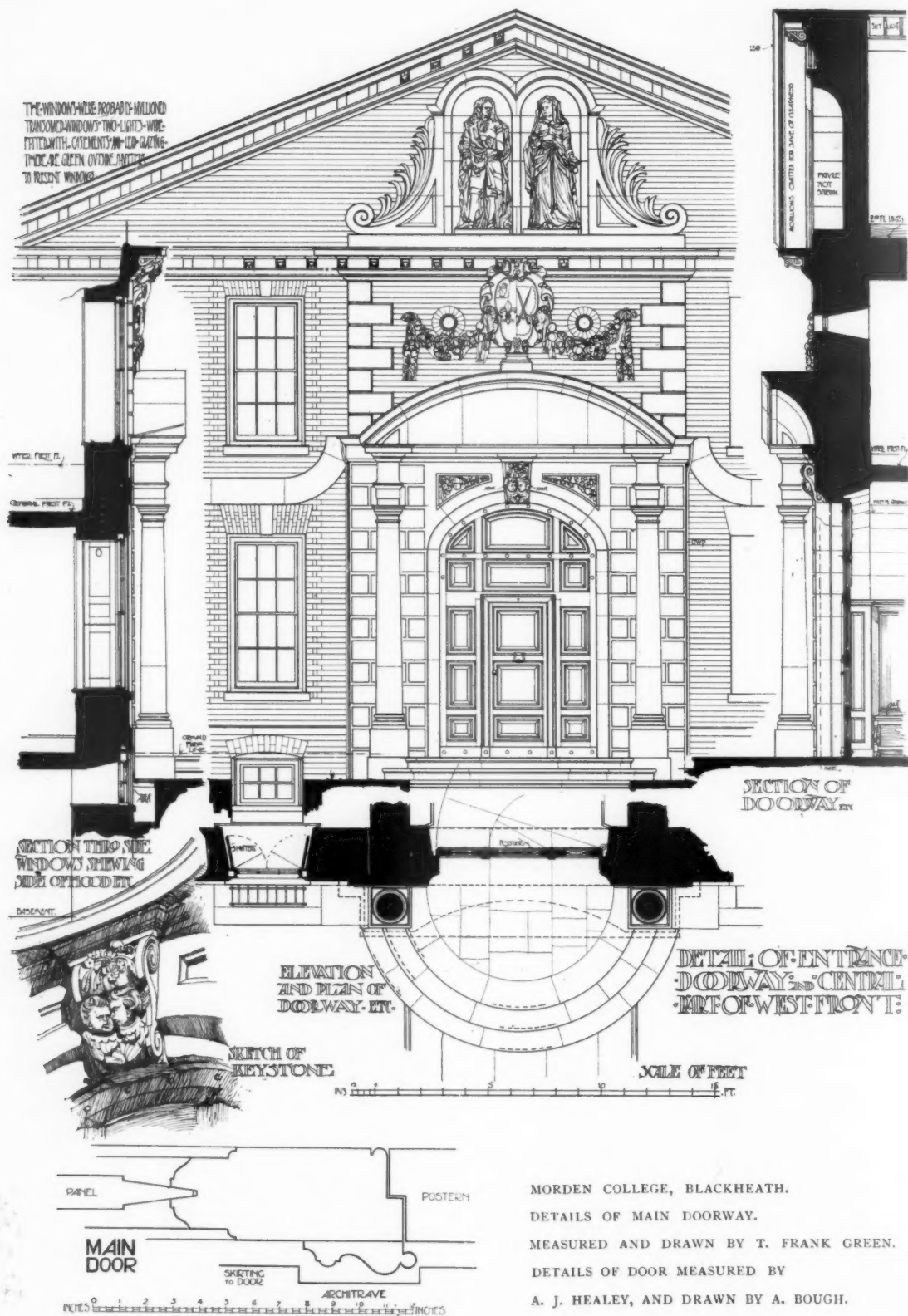
Photo: Arch. Rev.

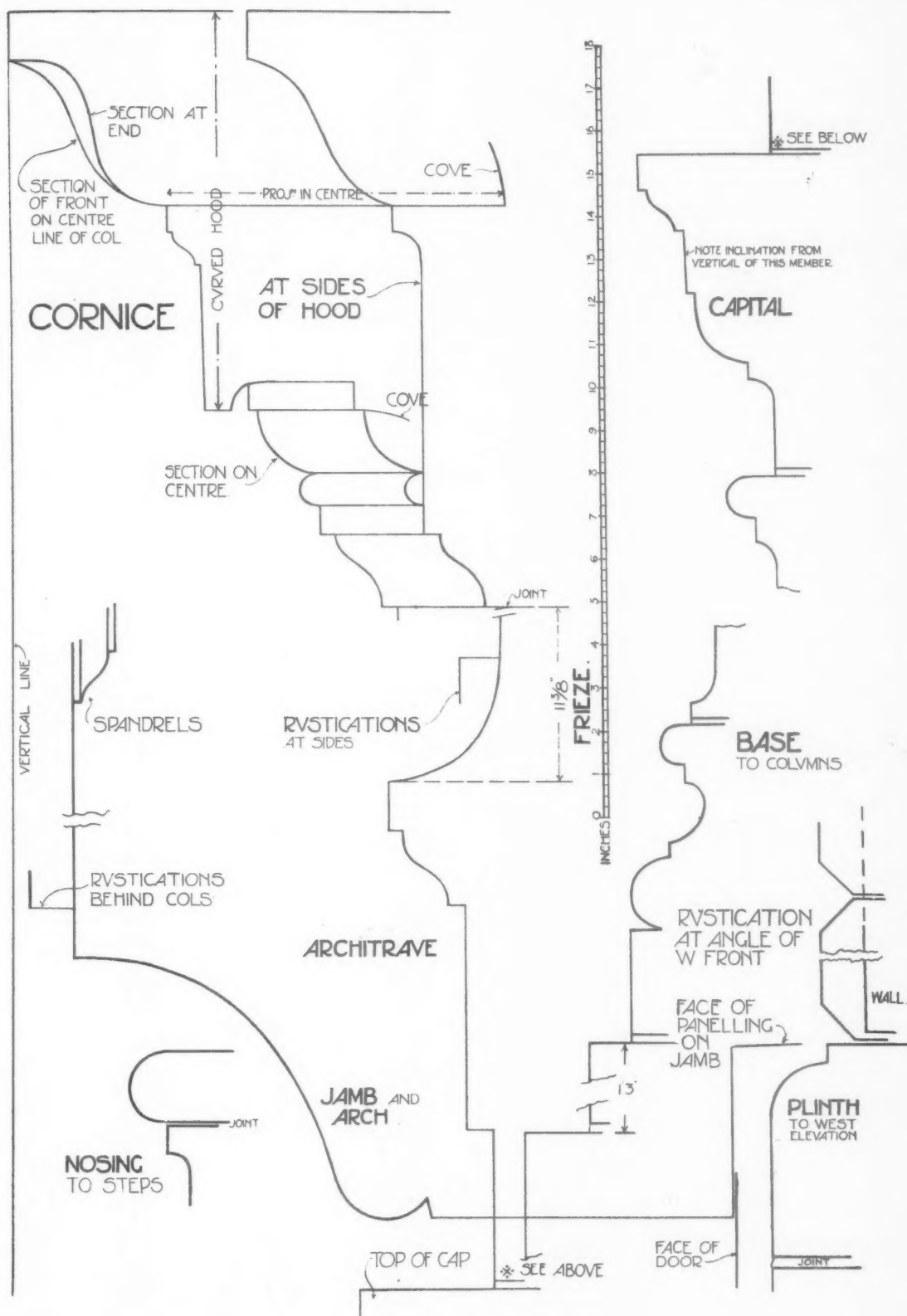




MORDEN COLLEGE, BLACKHEATH. MAIN DOORWAY.

Photo: Arch. Rev.





MORDEN COLLEGE, BLACKHEATH. DETAILS OF MAIN DOORWAY.
MEASURED AND DRAWN BY T. FRANK GREEN.

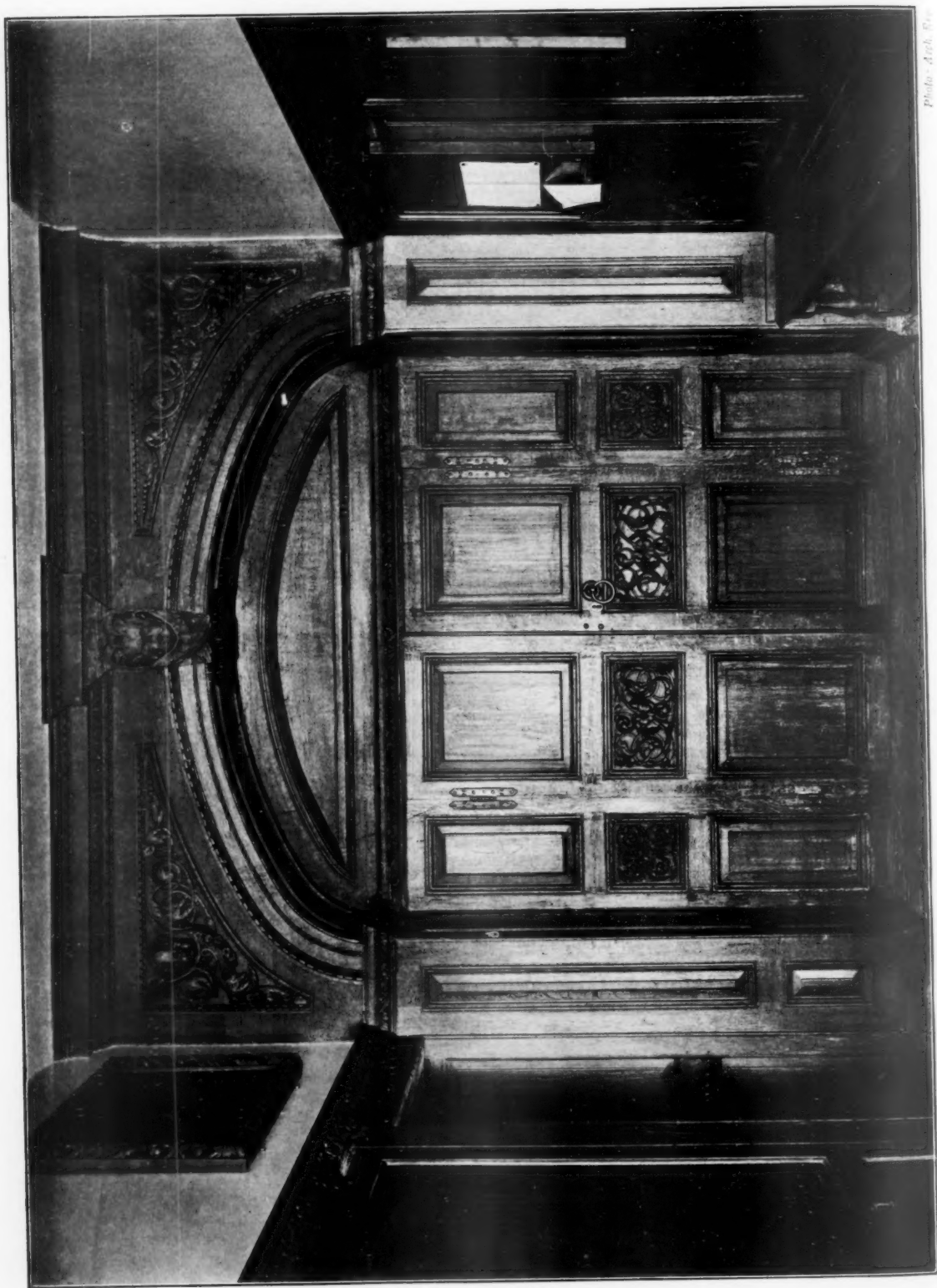
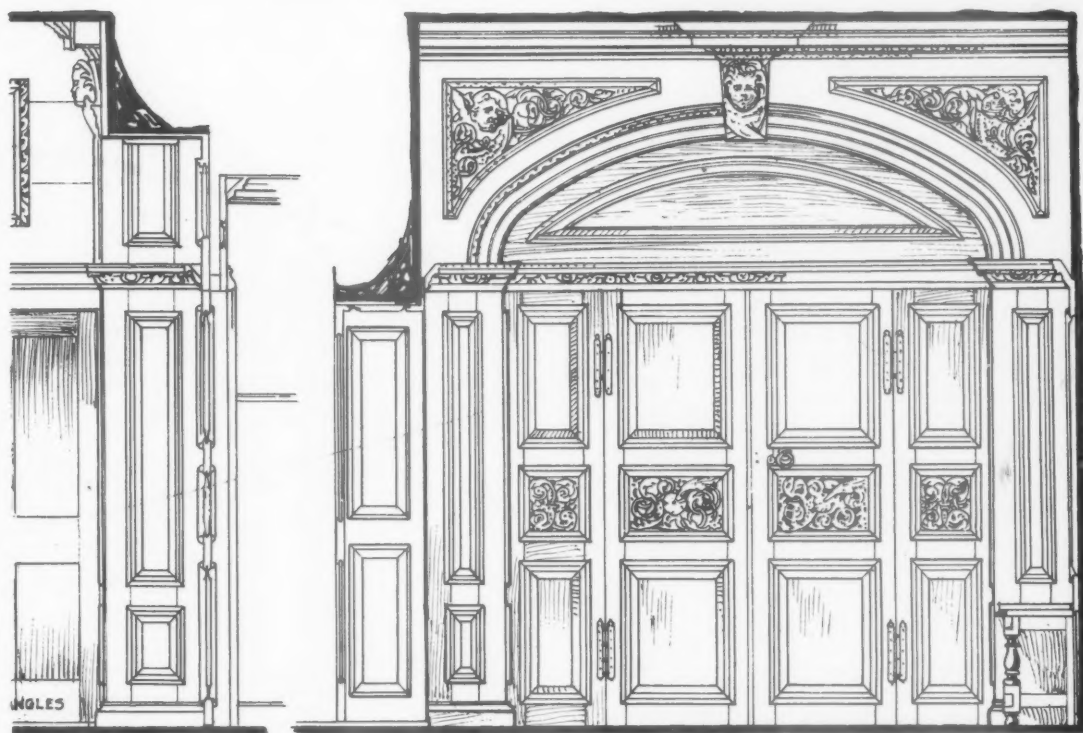


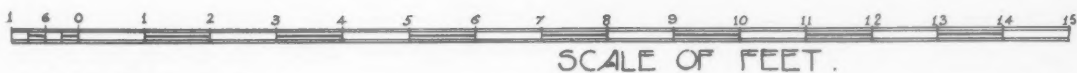
Photo. Arch. Soc.

MORDEN COLLEGE, BLACKHEATH. DOORWAY TO CHAPEL.

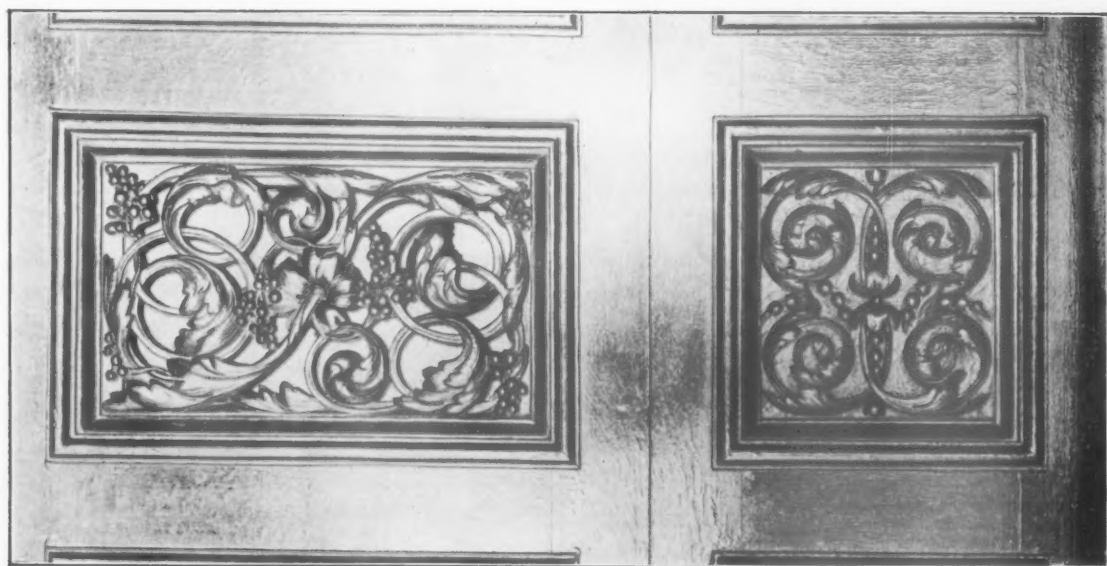


CVP^d CHAPEL DOOR.

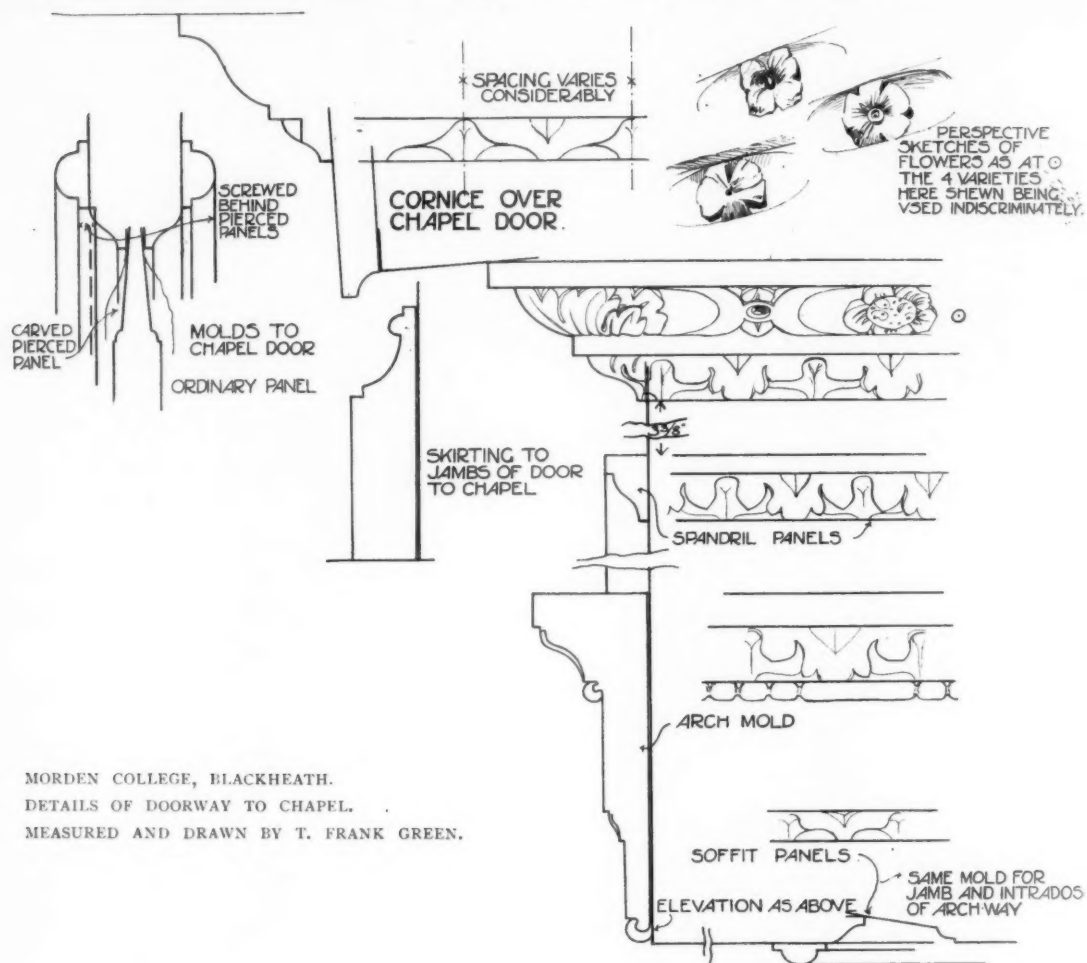
DOORWAY TO CHAPEL



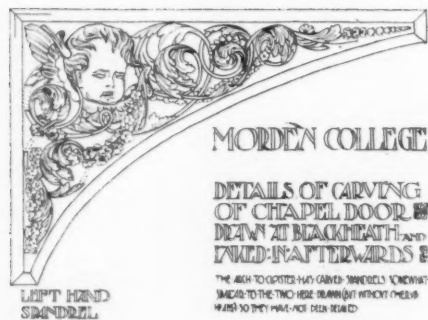
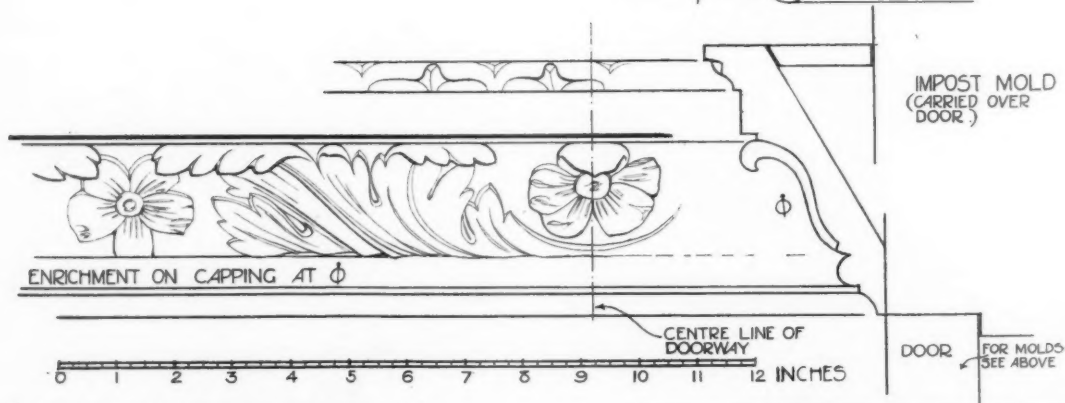
Details of Doorway to Chapel.
Measured and drawn by T. Frank Green



Detail View of Panels to Chapel Door.
MORDEN COLLEGE, BLACKHEATH.



MORDEN COLLEGE, BLACKHEATH.
DETAILS OF DOORWAY TO CHAPEL.
MEASURED AND DRAWN BY T. FRANK GREEN.

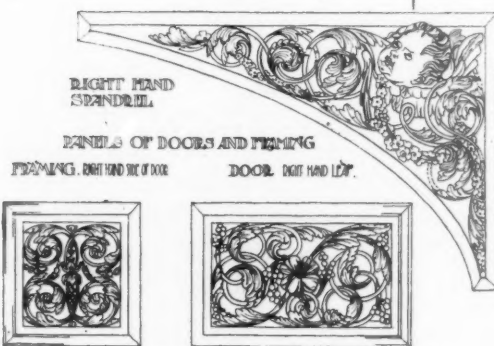


MORDEN COLLEGE

DETAILS OF CARVING
OF CHAPEL DOOR
DRAWN AT BLACKHEATH
FEBRUARY 1871

THE ARCH TO CHAPEL HAS CARVED SPANDRELS (WHICH
WAS NOT THE TWO HERE DRAWN) BUT WITHOUT THEM
WAS NOT THE WAY NOT BEEN REARED

$\frac{1}{16}$ full size.



THE OTHER PANELS ARE SIMILAR TO THESE

The Crowning Quality of Architecture.

Endurance is the crowning quality.—Lowell.

FROM time immemorial great architects, of all nationalities and every epoch of design, have insisted, as one of the first principles, upon the use of building materials—of, as far as possible, an indestructible nature—wrought together upon a scientific and permanent basis of construction.

The old masters of architecture also teach us that this quality of durability should not only apply to the existence of a building but that, æsthetically, in whatsoever style or phase of art it may be conceived, it should be one likely to command the unchangeable approbation of successive generations of artists.

The problem to be solved by the architect of to-day, who is desirous of creating a monumental work, is one therefore of a two-fold character, embracing, as it does, the question of the *life of the design* in addition to that of the physical durability of the building.

To what extent are modern architects qualified by natural ability, scholarship, and training, to achieve the desired results?

If the architectural productions of past ages are to form a criterion, the impartial critic is bound to say that there are at the present time no architects in England who can possibly aspire to be classed with those ancient masters of their art who were so largely instrumental in creating "the glory that was Greece and the grandeur that was Rome." Nor, adopting a less severe test, do the works of our modern architects compare favourably either

with those of the classic revivalists of the fifteenth and sixteenth centuries in Italy or with the best productions of the more eminent of their English brethren of the succeeding two hundred years.

When the Italian Renaissance was firmly established in this country and its full significance recognised by Inigo Jones, Wren, Gibbs, Chambers, and others, architectural scholarship was at its zenith. Recently, however, it has ceased to play an important part in an architect's training, and unfortunately it is probable that at no time during the past 300 years have architects been so imperfectly educated as are those of to-day.

True, they travel and draw, and o'ten draw well, many celebrated buildings of a bygone age. They visit "classic" Athens, and the ancient edifices of the "eternal" city, and return home, filled with enthusiasm for the architectural glories they have seen, to complacently resume their occupation of designing in the popular style of to-day, of which distorted orders and dwarfed baluster-shaped columns—possessing the subtle attraction of that beautiful architectural refinement, the double entasis—are apparently indispensable features.

It is an undoubted fact that whilst the old-time men of the Renaissance school were content to use the orders as they were handed down to posterity by the artists of ancient Greece and Rome, modern architects mutilate and distort, sometimes almost beyond recognition, the beauty



TEMPLE OF SATURN, ROME.

of their detail and the grace, harmony, and proportion of their outline.

Is it not amazing that any architect possessing a modicum of artistic instinct and culture can fail to realise that his professional reputation will not be made by the charmingly simple process of *burlesquing* the work of his great predecessors?

Let him take to heart the maxim of a Roman poet of the Augustan age:—

There's nothing gotten in this life
Without a world of work and strife.¹

Bearing in mind the fact that the chief desideratum is *good* work rather than a large amount of so-called "originality," usually resulting in vulgarising classical refinements, no architect should attempt to inaugurate what he fondly imagines to be a new style of art *before* he has made himself thoroughly conversant, by years of study, with the methods and traditions of the old masters.

In this age of architectural mediocrity, of bad taste, of little or no scholarship, it is not easy to understand the architect's dread of being stigmatised as a "copyist." Better, far better, is a building possessing little or no originality if it be designed in a scholarly manner, than one in which its author's craving to break fresh ground has compelled



SOUTH PORCH, ST. MARGARET'S CHURCH, YORK.



THE ARCH OF TITUS, ROME.

him to resort to the use of details at once unconventional and bizarre.

Poets, painters, sculptors, and the ablest architects of the past, whilst avoiding servile plagiarism have not scrupled to draw freely upon the works of recognised men of genius of bygone times for their sources of inspiration.

Remember Rudyard Kipling's lines:—

When 'Omer smote 'is bloomin' lyre,
He'd 'eard men sing by land an' sea,
An' what 'e thought 'e might require
E' went an' took—the same as me!

The market girls an' fishermen,
The shepherds an' the sailors, too,
They 'eard old songs turn up again,
But kep' it quiet—same as you!

They knew 'e stole; e' knew they knowed.
They didn't tell, nor make a fuss,
But winked at 'Omer down the road,
An' 'e winked back—the same as us!

Recognising, with the great masters, the value of scholarship in art, the young or inexperienced architect should endeavour to be entirely uninfluenced by the vagaries of modern work, and strive to model his designs upon those examples of the past which have successfully withstood the most severe of all tests, viz., that of *time*.

In short, to obtain the crowning quality of

¹ Nil sine magno Vita labore dedit mortalibus.—Horace, Sat. ix. Book I.



STAIRCASE, CLIFFORD'S TOWER, YORK.

architectural design, an artist must resist the blandishments of any florid, and therefore ephemeral phase of art, and work only in that of the best and purest period of the type he affects.

If the design of a building should be one that is likely to emerge successfully from the trying ordeal brought about by the mutations of time and fashion, the materials of which it is constructed must also be of an enduring character. Unfortunately, year by year, the action of the atmosphere of our large cities is having an increasingly disastrous effect upon much of the stonework used in the construction of important buildings. Even Wren's masterpiece of architecture, St. Paul's Cathedral, shows signs of rapid decay, and this despite the fact that the Portland stone used is of the best quality—far finer indeed than any that is now available. Westminster Abbey, constructed of various kinds of limestone, is mouldering, whilst the beautiful Chapel of Henry VII., built of Caen stone and restored with Bath oolite, has again given way under the influence of the smoky moisture-laden atmosphere. The Dolomite limestone, used in the Houses of Parliament, has disintegrated to a distressing extent, although doubtless, in this case, the process has been hastened by the

deep undercutting and intricate nature of the mouldings and embellishments.

Nor are these lamentable ravages on our buildings confined to London, as investigations made in other cities reveal a similar state of affairs, and letters recently published concerning the condition of the stonework of the Glasgow Municipal Buildings will be fresh in the minds of many.

Various costly experiments have been made, from time to time, with the view of solving the problem of preserving the stonework of city buildings. Several so-called "preservatives" are in existence, but hitherto their use has not been attended with complete success, and the frailty of life of many modern structures is pitiable when compared with the durability of ancient edifices still existent in Egypt, India, Greece, and Italy.

Tenacity, durability, hardness and compactness are the necessary attributes of a good building material, and granite which is composed of three minerals, quartz, felspar, and mica, possesses these essentials in an eminent degree.

The air of large cities, charged with smoke, contains sulphurous hydro-chloric and other acids which are deposited upon the buildings with every fall of rain. As quartz is insoluble



GATEWAY, CANTERBURY.

in rain-water and acids, it follows that it should enter largely into the composition of a building material selected for external use, and granite contains no less than 70 per cent. of quartz in its composition. Rocks contract with cold and expand with heat, and any great variation in temperature has its effect upon building stone. In the United States, where there is an annual thermometric range of over 90° Fahr., experiments were made to test this amount of expansion and contraction, with the following results:—

"It was found that in fine-grained granite the rate of expansion was '000,004,825 for every degree Fahr. of increment of heat—in white crystalline marble it was 000,005,668, and in red sandstone '000,009,532, or about twice as much as in granite."—*American Journal of Science*, Vol. XXII. p. 136.

The value of granite as a building material is attested by many ancient structures still existent. The quarries of Assouan, from which the beautiful Egyptian granite was obtained, were worked under the old empire (at latest about 2830–2530 B.C.), and the early Egyptians strongly fortified the town of Syene, on the east bank of the Nile, both to enable them to blockade the way into Egypt by land, and to protect their valued quarries, whence, from the earliest ages, they obtained their principal supply of granite.

Further evidence of the immense importance formerly attached to this material is found in nearly all of the existing buildings of ancient Egypt, and in the neighbourhood of Assouan the sites of the old quarries can still be traced and the marks of the picks and chisels distinguished.

Adolf Erman in his interesting book entitled "Life in Ancient Egypt" states: "Some of the granite blocks in the temple of King Chafre, not far from the great Sphinx, measure fourteen feet in length, and those under the architrave in the sanctuary of the Crocodile God Sobk, in the Fayum, are more than twenty-six feet long. Among the Theban obelisks there is one of a height of 107 feet, whilst a papyrus speaks of an obelisk from the Assouan quarries which measured 120 cubits (nearly 200 feet.)"

Egypt by no means stands alone in the possession of such durable memorials of a bygone age, as India numbers amongst her treasures of antiquity the thirty-four wonderful temples of Ellora, which were hewn out of the solid granite rock.

To those who may offer the objection that granite is not a material which lends itself to the modern phase of architecture, the reply is that style is evolved by experience or genius, and that



DOORWAY, ST. PAUL'S CATHEDRAL, LONDON.

more often than not the qualities of the material to be employed suggest the key-note of the design. If a change of style resulting in a more severe, a more stately, and a more scholarly type of architecture were to synchronise with the free and unfettered development of the granite industry, London and other large cities might be spared the affliction of an increase in the number of the huge "ornate" monstrosities which, sad to say, are so rapidly and so effectually ruining the aspects of our streets and thoroughfares.

Possibly the granite obtained from various parts of our own country would have been more extensively used in the construction of modern public buildings, had not its extreme costliness prohibited its general adoption and compelled us to look further afield for our supply.

Nature has given to Norway not only an abundance of granite, but also unique facilities for quarrying and transporting. Cranes or other expensive appliances are seldom required, owing to the geological formation of the rock, which is of such a character that the finest blocks are on the surface, with no overburden to be first removed. The cleavage, both horizontal and vertical, ensures free and accurate splitting, resulting in an enormous saving of expense.



WATER GATE, YORK STAIRS, LONDON.

The quarries are situated upon the banks of the Fjords, whereby direct loading into large steamers is effected, and the necessary timber for packing is plentiful and close at hand.

For many years past immense quantities of this granite have been used throughout the world for embankments, bridges, docks, etc., and the comparatively low price at which it can now be obtained—equal, under certain conditions, to the average cost per foot cube of the best Portland stone—renders it probable that it will be largely

specified by architects for buildings of an important character.

Although granite does not lend itself to the trivial carvings and weak conventional ornamentation which appear to fully satisfy the artistic instinct of the day, yet architects and public bodies who are responsible for or interested in proposals for the erection of new buildings have it in their power to inaugurate, by the free use of the best of all building materials, a style of architecture at once suitable to our climate and



ROMAN ARCH, S. REMY, PROVENCE.

destined to please the æsthetic sense of many future generations.

It may be predicted, with some confidence, that as a natural sequence of the institution of a well-devised system of compulsory architectural education, English architects of genius² will arise in the near future who are capable of designing work of a sufficiently monumental character, both in the constructional and æsthetic sense, to justify

them in saying, as Wren himself might well have said, in the well-known words of Horace:—

Exegi monumentum aere perennius
Regalique situ pyramidum altius,
Quod non imber edax, non Aquilo impotens
Possit diruere, aut innumerabilis
Annorum series, et fuga et temporum.
Non omnis moriar multaue pars mei
Vitabit Libitinam.

Horace, Ode XXX, Book III.

A. W. S. CROSS.

² Without a genius learning soars in vain;
And without learning, genius sinks again;
Their force united, crowns the sprightly reign.
Elphinston.

Notes.

ANOTHER interesting attempt to improve the East End of London is promised us in the "Country in Town" exhibition, which will be held in July at the Whitechapel Art Gallery. The object of the exhibition is, as the prospectus points out, "to show Londoners what can be done to bring into the neighbourhood something of the beauty, freshness, and inspiration of nature." From the purely architectural point of view the most interesting feature should be the designs which Mr. Imre Kiralfy is preparing to show how both Shadwell Market and Spitalfields can be improved without any displacement of housing accommodation. The improvement of Spitalfields must only be a question of time. Electric tramways are now being laid in the district, and will probably serve to increase the existing congestion of traffic, and the present conditions cannot long be overlooked by the London County Council. With Shadwell Market the case is different. The market, as is well known, was acquired some years ago by the City of London in the interests of Billingsgate Market, and since its acquisition Shadwell Market has simply been permitted to become a derelict institution. The idea of making use of this area has originated with Miss Hall, curator of the Borough Council Museum in Whitechapel. Miss Hall's idea is that the space should be utilised for a playground, a concert hall, and a winter garden, and she also hopes that a museum may be built there which would contain specimens of the various things brought into the Port of London. The market building itself she

would like to see pulled down, because not only does it serve no useful purpose, but it shuts out a view of the Thames: and, as a glance at the map of London will show, the site commands a considerable stretch of the river. In addition to these designs by Mr. Kiralfy, the exhibition will also contain a number of other shows. Under a section entitled "Living Things" will be an exhibit of (a) plants, suggested by expert nurserymen, which might be grown in London; (b) plants which have been grown in London and in London schools; (c) such plants arranged for windows, gardens, or roofs; (d) aquaria, vivaria, beehives. Another section will illustrate by pictures and models from London and other urban centres (a) trees (including the planting of streets), parks and open spaces; (b) children's gardens and playgrounds; (c) town gardens; (d) garden suburbs and garden cities; (e) railway embankments and stations; (f) country cottages suitable for towns; and (g) open-air swimming baths. Lastly, there is to be a section illustrating city life in Japan and other countries. The city life of Japan will be illustrated by the courtesy of Count Mutsu of the Japanese Embassy, and, as Lord Carrington explained at a meeting held not long ago, the exhibition committee hope to obtain the aid of the London County Council in making the municipal parks like they are, for example, in Washington, where the parks, laid out as continuation schools in which nature-study, physical drill, and geographical lessons are taught to the children, have become real educational institutions.

Thomas Garner, Architect.

Born 1839; Died 1906.

FROM his brother architects, as from that larger though extremely limited number of his countrymen who are interested in contemporary architecture, Mr. Garner never received the full recognition to which his conspicuous abilities, scholarly knowledge, and remarkable industry entitled him. This is attributable, in the first place, to his singularly shy and retiring disposition; in the second, to the fact that his name was for so many years coupled with that of his distinguished partner, and was second in the firm so well known as that of Messrs. Bodley & Garner. If a certain sacrifice or submersion of individuality is inevitable in such a conjunction, it is the more fitting that its close should provide the occasion for some amends in the form of testimony to personal achievement; and this notice is prompted by the desire to bear such testimony as is warranted by intimate acquaintance with Mr. Garner and his work.

Though the real conjunction—the actual partnership—lapsed some nine years ago, and the subsequent period has been employed, by both parties to it, in the production of much independent design, their long association, and the well-defined characteristics of its outcome, have led to a frequent confusion of their individual efforts and a mistaken attribution of their designs, which were exemplified last month in some of the lists of their buildings appended to obituary notices of Mr. Garner.

Born at Wasperton Hill, in Warwickshire, in 1839, Thomas Garner passed his early years amidst the simple surroundings of a remote countryside, and imbibed the healthy country instincts which became a part of his nature, and were never weakened or blunted by long years of life in London, but awaited, with confident anticipation, that happy return to the country so fully realised by the acquisition of the beautiful Jacobean manor house at Fritwell, in Oxfordshire, where he died on the 30th of last April. To his country education he owed his love of riding and the excellent horsemanship which he always retained, and which added such intense zest to his numerous archæological journeys on horseback, shared by his wife or his friends. From the same source he derived his instinctive feeling for simple and direct methods, for old-

fashioned crafts and constructions, for 'ancientry' in every direction. His intuitive conservatism was fostered throughout his life by his ardent and devoted study of the past, in the fine arts, and in literature.

At the age of seventeen, prompted by his already developed love of architecture and his natural gift of draughtsmanship, he entered the office of Sir Gilbert Scott as one of the numerous articulated pupils of that gentleman. Amongst his contemporaries at "Scott's" were many who have since attained distinction. One of his immediate predecessors, who still maintained an intimate connection with the office, was Mr. George Frederick Bodley, R.A., already beginning to establish his reputation, and a warm friendship was soon established between the senior and the junior.

On the completion of his pupilage Mr. Garner returned to Warwickshire, and was responsible within the next few years for various small works undertaken on his own account or as representative of Sir Gilbert Scott. In the latter category was the repair of the chapel of the Leicester Hospital at Warwick, a responsible and difficult task, which led, one day, to an incident that exemplified the energy and the promptitude of the young architect. He was suddenly interrupted at dinner, at his father's house at Wasperton Hill, by the arrival of a man on horseback with the news of the imminent collapse of a portion of the hospital. Dismounting the messenger and jumping on his horse, Garner rode full gallop into Warwick, and arrived in the nick of time to devise a system of shoring and save the structure, which he ultimately buttressed into security.

About the year 1868 he returned to London to assist his friend Bodley, who found himself somewhat overburdened with work. This relation soon grew into the partnership which was to last for over twenty-five years. It was a friendly arrangement, never formalised by any legal document, and was dissolved with mutual consent and goodwill in 1897.

At first the collaboration was actual and close, and produced work of such undivided inspiration and homogeneous character as to give no external evidence of dual authorship. What is perhaps noticeable in some of the earlier buildings by the

"firm" is the supersession of the French influences, which had hitherto shown themselves in Mr. Bodley's work, by a distinctively English manner. For this change, however, Mr. Garner's pronouncedly English sympathies were by no means entirely responsible, as his partner's work had begun to show evidences of conversion, in this respect, a year or two before the partnership began. This period of close collaboration produced the church of St. John at Tue Brook, Liverpool, soon followed and eclipsed by the two remarkable churches of the Holy Angels at Hoar Cross, Staffordshire, and of St. Augustine at Pendlebury, near Manchester—the former begun in 1871, the latter in 1873. As their work increased it became less exclusively ecclesiastical, and, though church building was ever predominant, their practice widened through the natural channel of collegiate buildings at Oxford and Cambridge to the design of private houses and public offices. It was perhaps this widening of their range in secular directions that first caused the cessation of actual collaboration.

The ensuing period of dual practice under partnership allotted most of the civil or domestic opportunities to the almost undivided initiation and control of the junior partner, while his senior, guided by his strong penchant for Gothic forms and for ecclesiastical work, devoted himself more especially to church building and decoration. It thus became their habit to divide their work, and to individualise, each partner assuming an entire and separate responsibility. In this way Mr. Garner was almost exclusively responsible for the design and supervision of most of the work at Oxford, such as the alterations and tower at Christ Church, St. Swithun's Quadrangle and the High Street Entrance Gate at Magdalen, and the Masters' Lodge at University, while he was entirely responsible for the subsequent President's Lodgings at Magdalen. To him also are chiefly due River House in Tite Street, Chelsea, and the new Class-room building at Marlborough College. Hewell Grange, Lord Windsor's Worcestershire mansion, with all its elaborate and costly details, its terraced gardens and their architectural accessories, was his work. But while accountable for so much of the secular building entrusted to the firm, Mr. Garner contributed sometimes to the large amount of its ecclesiastical work, and designed, while his partner was busy with other work, the well-known reredos in St. Paul's Cathedral, and

several sepulchral monuments, such as those of the Bishops of Ely, Lincoln, Winchester, and Chichester, and that of Canon Liddon.

He was the author of the competitive design for Liverpool Cathedral submitted in the abortive competition of 1885, for which his rapid draughtsmanship and untiring industry produced a wonderful number of complicated drawings in a very short space of time.

Of his work subsequent to the dissolution of partnership it is, perhaps, sufficient to mention Yarnton Manor, Oxon.; the Slipper Chapel at Houghton-le-Dale; Moreton House, Hampstead; the Empire Hotel at Buxton, a somewhat elaborate structure; and that crowning work of his arduous life, the choir of Downside Abbey, near Bath, beneath whose roof his body now reposes, views of which we shall publish in a future issue. This building was completed in the summer of last year, and showed that, though gradually failing in health, his power of design and mental vigour remained with him to the end. He was, as has been said, of a shy and modest disposition, and less known than his most unusual abilities, scholarship, and attainments would have allowed a less retiring character to remain. A striking instance, however, of contemporary esteem was afforded by Mr. J. F. Bentley, who, stricken by his fatal illness, when asked by Cardinal Vaughan what architect he would choose to carry on his work in the Cathedral at Westminster, replied "Garner, for he is a man of genius."

Profoundly versed in mediæval archæology, of which he was an unremitting student, filled with reverence for antiquity, and imbued by early training with a love of Gothic art which never waned; his feeling for the art of the Renaissance was still enthusiastic, particularly for its English manifestations. River House, Chelsea, completed in 1879, and referred to above, shows that he could design happily in a manner then relatively little appreciated; its sober early eighteenth-century character is singular as the design of a reputed Gothickist.

Whatever may be felt about his work there is no mistaking its sincerity, or the minutely careful finish of its details. He was immensely industrious, a tireless worker, and spared no pains to perfect what he undertook. He will long be remembered by his friends for his warm heart, his ardent enthusiasm, and his minute and scholarly knowledge.

EDWARD WARREN.

THE
KING EDWARD VII. SANATORIUM,
MIDHURST, SUSSEX.



H. PERCY ADAMS, F.R.I.B.A.
Architect.

The King Edward VII. Sanatorium.

HIS MAJESTY THE KING during one of his visits to South Germany went over the sanatorium at Falkenstein, and noticed the great benefits acquired there by people suffering from consumption in this and similar institutions. A large sum of money having anonymously been placed at His Majesty's disposal, he determined to build and endow a model sanatorium for consumptives in England, and appointed an advisory committee consisting of Sir William Broadbent, Sir Richard Douglas Powell, Sir Francis Laking, Sir Felix Semon, Sir Herman Weber, and Dr. C. T. Williams, to which body were afterwards added Sir Frederick Treves, Colonel Lascelles, Lord Sandhurst, Mr. Willie James, and Mr. Bailey. Dr. John Broadbent and Dr. Horton Smith Hartley were appointed the secretaries.

With the object of obtaining ideas and suggestions on the subject, His Majesty offered three prizes of £500, £200, and £100, for the best essays and plans (to be submitted by medical men) on the construction and working of a sanatorium for 100 beds; no fewer than 180 essays were sent in by competitors from all parts of the world, and the prizes were awarded to those the committee considered most worthy, considerable information being obtained from them.

The next stage was the choosing of a site, and the committee visited many districts in England, and eventually, after much thought and trouble, the present position was selected as offering the greatest advantages in shelter, altitude, soil, and vegetation, and was duly purchased from the Earl of Egmont. It consists of about 150 acres of land on the southern side of Easebourne Hill, Midhurst, and is almost co-terminous with the tract of land marked as Lords Common upon the Ordnance Map.

The site is bounded on the west by Pound Common (a public common), on the north and east by the Cowdray Estate, and on the south by Hollist Common. The highest point at the north-west is 630 ft. above the Ordnance Datum, and from this point the ground slopes gently to the south, and is partly covered with woodland, including a grove of magnificent pine trees; the western slope consists of open, heather-covered moorland, ending in a deep ravine which will form a beautiful sheltered walk.

The southerly portion of the site consists of park-like grounds and a comparatively level plateau. At an altitude of 494 ft. stands the sanatorium, with splendid views over the South Downs extending as far as Chanctonbury Ring. This spot is sheltered to the north and east by rising ground

and pine groves, and is also to some extent screened to the west and south-west.

The large open tract of land in front is well sheltered, and has been laid out with spacious terraces, lawns, and flower-borders, Miss Jekyll, the well-known horticulturist, being consulted as to the designing and planting of these.

A series of walks will be cut in the moorland and pine woods, not only picturesquely arranged and commanding fine views, but of proper gradients to suit the treatment of patients, so that it will be possible for the medical superintendent to prescribe the right walk with proper gradient for each degree of lung power.

The soil is the lower green sand of the lower cretaceous series, which is admirable for surface drainage, for residential purposes, and for obtaining a good foundation.

A boring for water was made in the south-east corner of the site, and it was found, though not in great abundance, at a depth of about 200 ft., but unfortunately so full of fine sand as to clog the pumping machinery; but by following the water-bearing stratum (Hythe bed) northwards a fresh outcrop was found on the north of Henley Hill, where a number of springs issued. On analysis the water proved of excellent quality and quite free from sand; the committee engaged Mr. Brough Taylor, the well-known water engineer, and he succeeded in collecting by culverts these springs, which are situated in North Park Copse, and has conducted the water to a large reservoir holding 60,000 gallons, situated near Henley Common; next to this reservoir is the pumping-station, containing two oil-engines each of 16 h.p. From this place the water is pumped, by way of a 5-inch iron main over a mile and a quarter long, to a reservoir containing 160,000 gallons, and situated on the highest point (630 ft.) of the site, and from thence it flows down to the sanatorium.

"The climate of the district, as shown by meteorological observations taken in the neighbourhood, is largely influenced by the shelter and proximity of the sea, being mild and equable; the annual rainfall is 30 inches; the number of rainy days 160; and the mean annual temperature 48 degrees Fahrenheit." (The above is from information given by Dr. C. T. Williams.)

The main building, as already mentioned, is placed on a plateau at about 490 ft. above sea level, and to the west is a small building containing rooms for research work, mortuary, and post-mortem room. Still further to the west, with a magnificent outlook, is the chapel, and largely hidden in a depression of the site to the north-west

of the other buildings is the laundry and engine-house, all connected to the main building by an underground passage (containing the heating-pipes, electric mains, etc.). A block of five cottages for the engineers, gardeners, etc., has been built on the north of the site, also a stable and large motor-house.

The drive leading to the sanatorium from the main road is $1\frac{1}{4}$ miles long, and was made by Messrs. John Aird and Co.; over 6,500 tons of stone were quarried on the site for its construction.

The main building is divided into two distinct parts: (1) the administrative building and (2) the patients' building. These are connected by a broad central corridor one storey in height, and having a flat roof so as to give additional means of access to the first floor. In fine weather it will also form a pleasant promenade for patients on the north side of the building. The buildings are planned on parallel lines east and west to obtain the best possible aspect for each room, and also owing to the slope of the site it would be more economical to build, and the administration building acts as a screen on the north of the patients' building. A line drawn through the centre of the buildings from north to south would be one point east of south.

The administration building has a main central entrance hall on the north side, and here is the foundation stone laid by His Majesty the King, November 3, 1903. On the right of the hall on the ground floor are all the rooms connected with the medical staff. First the porter's office, who will be in attendance to the front door, and supervise patients entering the waiting-room for those wishing to consult the medical officer in his consulting room, then a small dispensary with sink and fittings for drugs, also a small dark room for the use of X-rays and photography, and an operating-room having large window of prismatic reflecting glass, and fitted with a sink and lavatory; the window has an outside blind that allows the room to be instantly darkened.

At the end of this building and facing due west is a large room fitted all round with bookshelves, for medical works and preserving records of cases investigated. This will be the common room of the medical staff; it is arranged to accommodate a full-size billiard table, presented by Mr. W. James.

On the left of the entrance hall is the large dining-hall. The whole of the walls are lined with Doulton's Carrara ware. The ceilings are plastered, and the floor is of York stone, and is heated as described later.

The tables in the dining-hall are so arranged that every patient will be able to look out on to the laid-out grounds north and south: off one corner

of the large dining-hall is a small room which it is proposed to use for any patient having a troublesome cough or being otherwise objectionable to the rest.

Between the dining-hall and the kitchen is a large serving-room fitted with steam-heated hot plate and carving table, also an apparatus for making coffee and hot milk, and having two sliding hatches to serve the food through, the counter being of pewter. Adjoining the serving-room is the nurses' dining-room, with a small pantry in connection. The large pantry is next to it, and each contains german-silver sinks for washing up the plate and glass; the patients' pantry being fitted with sterilizer for the forks and spoons.

The kitchen is a large airy room over 20 ft. high, and fitted with the most up-to-date cooking apparatus, two large ranges, a coke grill, steam jacketed boilers, potato steamers, etc. There are two large sculleries, one for the preparation and washing of vegetables and fitted with marble bins for storage, and with porcelain sinks for washing, the other to be used for washing up plates and dishes and fitted with german-silver sinks: these, it is thought, will be better for this purpose than porcelain sinks and cause fewer breakages, and have not the disadvantages of liability to verdigris of brass or copper.

To the north of the kitchen is a small cooks' room for making pastry, also two larders and a large store-room for grocery stores, fitted respectively with marble shelves (these look cleaner than slate and cost very little more), and bins, cupboards, and wood shelves.

Under these rooms in the basement are extra store-rooms and a complete ice-making refrigerator capable of making 3 cwt. of ice a day, and a milk sterilizer.

The whole of the kitchen department has the walls faced with white glazed tiles, and all the floors are of red tiles with rounded tiles next to the floor.

A large servants' hall faces west, and there is also provided a small room for the housekeeper. This comprises the whole of the kitchen department.

On the first floor of the administration building in the centre are the matrons' office, sitting-room, bedroom and bathroom, and also the nurses' sitting-room; this is panelled at one end, forming a recessed angle fireplace.

Round the upper part of the hall is a gallery panelled in teak, which will form a pleasant lounge; access to it is obtained from the nurses' staircase. A good view of the large dining-hall can be obtained from this gallery.

Over the medical officer's rooms is the medical superintendent's flat, having a separate private

entrance and staircase; it consists of a drawing-room with large bay window, a small oak, panelled dining-room, five bedrooms, and a bathroom—these rooms, and also the medical officer's rooms on the ground floor, look out westerly, and over a private garden and tennis-lawn.

In a corresponding position over the kitchen wing are servants' bedrooms and bathroom, and the whole of the second floor is taken up with thirteen nurses' bedrooms and two bathrooms, and servants' bedrooms (for twenty-four) with bathrooms and linen-rooms.

It is worthy of notice that every room in the building is so situated as to have two distinct exits in case of fire.

Bedrooms for three porters and a large common sitting-room are provided on the lower ground floor under the medical officer's rooms; from this position they have access to the entrance hall, to the pathological building, to the patients' building, and to the kitchen lift to fetch their meals without passing through any other department. Under the central corridor in the basement is a very large, well lighted and ventilated linen-room. A central room in the basement is provided for destruction of sputum, a special apparatus being fitted, worked by 30-lb. steam pressure (240 degrees Fahrenheit).

With regard to the patients' building, this is arranged for two distinct classes of patients, Class A and Class B, the latter class paying higher fees and being rather more luxuriously fed and housed. The building is divided into three distinct blocks, connected by corridors on each floor, and the rooms are all so arranged that each class of patient and each sex of each class can obtain access to the grounds, the dining-hall, the medical consulting rooms, their recreation-rooms and cloak-rooms, and the hydropathic or bathrooms without passing the rooms of another class or another sex.

On the ground floor of the centre block is a large recreation-room and a small writing-room for each sex of Class A; an additional height is obtained for the large rooms by a flight of steps leading down from the upper part of the room. The panelled dado, the flight of steps, and the chimney-piece are all of teak, all projecting mouldings have been omitted, and any enrichment is obtained by use of ebony and holly wood inlay. The large columns are built up of teak boards secured together with ebony keys; this is a very unusual treatment, but has a good appearance, and is certainly better construction than the ordinary method.

In the centre are the hydropathic bathrooms, so situated as to be easily accessible for both classes and sexes, and the medical officers.

Each room is fitted with a special apparatus, to be worked by medical officer or nurse for spraying or douching the patient with hot or cold water at any temperature. There are four separate dressing-boxes in each room, and the walls are all lined with white glazed tiles. The lighting is so arranged as to be directly on to the patient being douched or sprayed. In the basement under the bathrooms are special rooms for airing towels and linen.

Opposite the cloak-rooms are the lavatories, tiled throughout with glazed tiles and fitted with white porcelain basins.

In either wing of the ground floor are sixteen patients' bedrooms for Class A. These are 16 ft. by 11 ft. 6 in. wide, they all look either S.S.E. or S.S.W., and have a balcony facing the south and 8 ft. wide paved with red tiles. The four bathrooms are lined with white glazed tiles, and are fitted with white porcelain baths.

On the first floor in the centre block, reached by the central staircase or the electric lift, are the rooms for Class B, fourteen bedrooms (seven for each sex), each 14 ft. by 11 ft. 6 in., and 11 ft. high, this allows about 1,750 cubic feet; there are also two sitting-rooms (one for each sex). All these bedrooms and sitting-rooms face almost due south and have a balcony 9 ft. wide in front of them, and so arranged that each patient has his or her section of the balcony screened on either side by glazed partition; there are doors in these partitions to give access to the doctors and attendants passing along the balcony. Electric light is fitted outside for each patient, and a canvas sun-blind can be let down to cover the whole balcony; these blinds are so arranged that a patient can raise or lower his own blind. Four bathrooms are provided for these fourteen patients, and a nurse's service-room, with a small lift serving directly to the kitchen corridor.

It will be seen that Class B have access to the grounds, the dining-hall, the consulting rooms, and the hydropathic rooms without passing any of the rooms used by Class A. In either wing of the first floor the rooms are similar although not quite so large as those on the ground floor: sixteen patients in each wing with bathrooms and service rooms.

In each wing are two small hand lifts, one to be used for clean linen and perhaps food, the other for dirty linen, sputum flasks, etc.

On the second floor are rooms to be used for those cases of Class A too ill to leave their bedrooms; the advantages obtained from placing these cases in this position are: (1) they will be quiet; (2) they can easily be served from the kitchen by the lift connected to the kitchen sub-way; (3) they are closer and therefore more

accessible to the medical offices and nurses' rooms than the other cases of Class A; (4) the passenger lift could be used for them as well as for Class B. This lift is of the most improved press-button type, and can easily be worked by patients without an attendant; it is of somewhat novel design, consisting of merely a platform and four sides, but has no roof, the car being supported at the sides.

The patients' wings are very similar, so that a short description of one will apply to all; they vary in size from 16 ft. by 11 ft. 6 in., to 13 ft. by 11 ft. 6 in., and are all 11 ft. high. The floors are all of wax-polished teak, the walls are plastered and covered with a patent and unique paper; this is used in nearly all foreign sanatoria, but never before in this country; it is claimed for it that it can be washed with soap and water or disinfectants, and where it has been used abroad the highest praise is given to it. A white enamel has been employed for painting the doors and the windows.

The windows are designed to open to the fullest extent from floor to ceiling, the upper part is made as a hopper or fall in casement, hinged at the bottom and opened by a specially designed gear to any angle to almost a horizontal position. Under this are French casements with specially designed fastenings to prevent rattling; the lower part of the window consists of a pair of wooden doors to open quite down to the floor. The door has a window over it, similar to the upper one on the other side and with similar gear for opening. All the patients' room doors have a window on the corridors facing them, so that by opening these a direct blow through is obtained for every room.

Each bedroom has a hot-water heated radiator in the centre of one side wall and opposite the end of the bed. There are two electric light brackets, one over the head of the bed and the other over the toilet glass, the switches being so arranged that a patient can switch on either light from either switch.

Outside the windows to all patients' rooms are covered shutters, so that by closing these rain or strong sunlight can be kept out, although air is still admitted, and also they secure privacy while the windows are open.

The furniture for the bedroom has been specially designed with rounded corners inside and out, without any mouldings or enrichments; it is all polished inside as well as out and left its natural colour.

The wardrobe is 3 ft. 6 in. wide, and has a rounded top, so that nothing can be put on it and it can be seen that it is kept clean; the washstand has glass top and splash back, the chest of drawers

acts also as a dressing-table, two small chairs and a mat.

The Pathological is a small separate building, containing the mortuary and post-mortem room, a special mortuary chapel being provided in the chapel building, and three laboratories for research work; all the rooms are lined with white tiles and fitted with sinks; the building is quite detached, but can be reached from the main building by a subway, and has a lift for taking bodies up to the ground level.

The laundry engine and boiler house are away to the north-west of all other buildings, in a natural hollow, at a lower level; on the upper level, entered from the road, is the laundry, so designed that the linen, which can be brought along the subway, follows a definite route, entering by the receiving room, then to the wash-house, the drying room, ironing room, airing room, to the delivery room, where it will be sorted and sent back to the sanatorium. The wash-house is fitted with the most modern appliances, sanitary, hygienic, and practical.

The chapel was a separate gift to His Majesty by Sir John Brickwood of Portsmouth. The plan is, as far as we are aware, unique in the history of church building. Dr. Theodore Williams, and some members of the committee suggested to me that an open-air chapel should if possible be designed. The outcome of their suggestion is the V-shaped plan with point of the V pointing north; the arms of the V form two naves of the chapel, one for men, the other for women; the chancel being at the apex, octagonal in form and domed. The southern sides of the naves have entirely open arcading, protected by a cloister on to a six inches lower level to prevent snow and rain from driving in.

The walls are of Bath stone, the floor of Gazeby (York) stone, the ceilings of plaster with slight enrichment. The windows have simple stained glass in geometrical designs. The pulpit, lectern, and altar are made of teak with inlays of ebony.

A feature of the chapel is the open-air pulpit, for it is proposed that the patients should sit in the cloisters and on the terrace in fine weather.

The elevations depend somewhat for effect upon the colour and quality of the materials employed, a combination of Bracknell red bricks and Luton grey bricks in varying proportions used in simple bond patterns—and by a selection of pointing a pleasant colour has been obtained and the glaring red so usual in new work avoided.

After careful consideration the system of open fires was selected by the Committee on account of cheerfulness for the recreation rooms, private

sitting-rooms, etc., the system of hot-water heating by means of radiators for the corridors, bedrooms and other parts, and a special system of floor warming for the dining-hall and chapel. This is carried out on a somewhat novel, and, as far as this country is concerned, unique plan, which is a modern improvement of the ancient Roman system known as the hypocaust, which may be still seen in some of the Roman villas unearthed in this country. That system comprised a low basement chamber beneath the floors of the rooms, and in this chamber was a fire-place and flues designed in such a manner that the actual floors of the rooms are heated from below.

The floors of the chapel and dining-hall are of stone, and beneath the floor pipe-channels are made in which are fixed pipes heated by steam. The steam is obtained from the main steam boilers, and the air in the channels becomes heated to a high temperature and gives off heat to the floor of the building. It will therefore be seen that this is an adaptation to modern requirements of a very ancient method of heating.

A system of hot-water service to baths and lavatory basins is provided throughout the institution,

and so arranged that hot water comes immediately when the taps are opened, and it is not necessary to draw off many gallons of cold water before obtaining hot, as is the case in many public buildings.

The electric current which is produced in the engine house passes from the dynamos to the main switchboard, and thence through electric cables to the various buildings. These cables are carried through the covered subways and along the basement corridors, and small branch cables are taken from them to supply groups of rooms.

The casing has a smooth, rounded outline without corners. The wires can thus easily be inspected in case of damage, and as the casing is painted to match the decoration of the walls it is scarcely noticeable.

There is a complete installation of electric bells, so that each patient can communicate from his own room to the nurse in charge, and in case a patient is confined to his bed he is provided with a telephone attachment to the bell so that he may speak direct to the nurse from his own room.

H. PERCY ADAMS.

THE KING EDWARD VII. SANATORIUM.

H. PERCY ADAMS, F.R.I.B.A., Architect.

E. R. DOLBY, M.Inst.C.E. (Dolby and Williamson),
General Consulting Engineer.

E. BROUGH TAYLOR, M.Inst.C.E., Consulting Engineer
for Water Supply.

SAMUEL G. THACKER, Quantity Surveyor.

Miss JEKYLL, Horticultural Designer.

W. ATKINSON, Clerk of the Works.

LONGLEY & Co., Crawley, General Contractors.

H. W. TINGLEY, Works Manager.

SUB-CONTRACTORS:

Joinery and Decorative Woodwork—LONGLEY & Co., Crawley.
Ironwork Construction—HOMAN & RODGERS, London.

Heating and Engineering—DARGUE GRIFFITHS & Co., Ltd.,
Liverpool.

Sanitary Work and Plumbing—DOULTON & Co., Lambeth, S.E.
Iron Casements and Gearing to Windows—WENHAM & WATERS,
Croydon.

Gearing and Door Springs—ROBERT ADAMS, Emerald Street,
London.

Bricks for Facings—THOS. LAWRENCE & SONS, Bracknell.
Bricks for Internal Walling—SUSSEX BRICK CO., Warnham.
Stone—BATH STONE FIRMS, Ltd.

Parian Enamel—RANDALL BROS., Palmerston House, London,
E.C.

Terrazzo Floors—DIESPEKER, Ltd., London.
Carrara Work in Dining Hall—DOULTON & Co., London.

Kitchen Fittings—JAMES SLATER & Co., Holborn Engineering
Works, W.C.

Laundry Fittings—W. SUMMERSALES & SONS, Keighley.
Electric Fittings—THOS. ELSLEY, Ltd., London.

Ornamental Plaster Work and Ornamental Rainwater Heads—
G. P. BANKART and THE BROMSGROVE GUILD, Bromsgrove,
Worcestershire.

Tiling—SIMPSON & SONS, St. Martin's Lane, London.

Electric Lifts—WAYGOOD & Co., Falmouth Road, London.

Hand-power Lifts—G. JOHNSON, Wandsworth.

Carving—W. AUMONIER & SONS, London.

Furniture—HEAL & SON, Tottenham Court Road, London, W.

Duresco—J. B. ORR & Co., Charlton, S.E.

Sirapite Plaster—GYPSUM MINES, Ltd., Mountfield, Sussex.

Floors, Polished—RONUK, Ltd., Brighton.

Stoves and Ranges—BRATT, COLBRAN & Co.

Tile Pavings—J. C. EDWARDS, Ruabon.

Fireproof Partitions—FIREPROOF Co., Ltd., York Buildings,
London.

Electric Lighting and Telephones—FOOT & MILNE, 66, Victoria
Street, S.W.

"Sa'ubra" Patent Wall Covering—SALUBRA WALL COVER CO.,
Oxford Street, W.

Sunblinds—N. VOICE, Horsham.



THE LODGE.

Photo: E. Dochree.



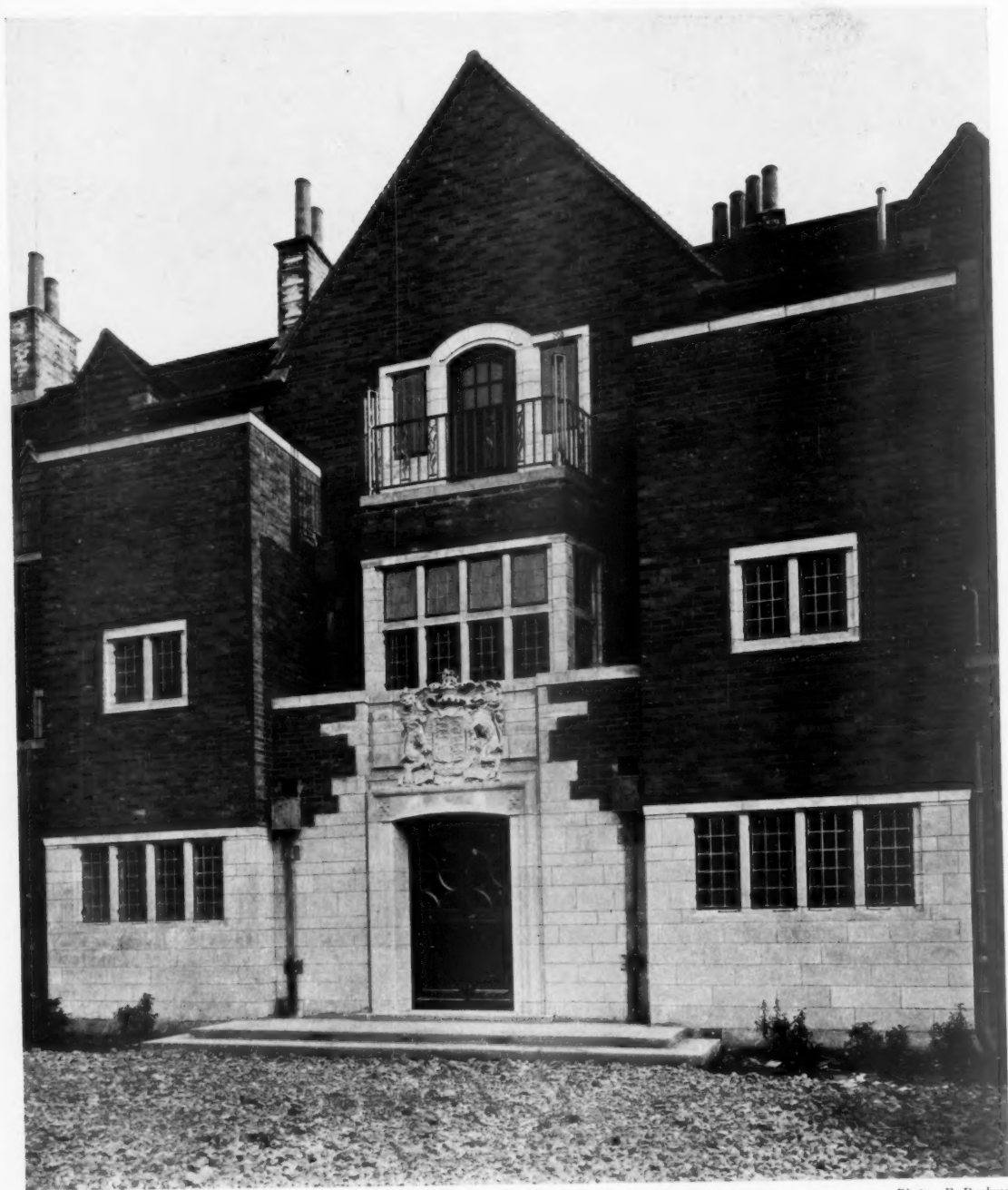
GENERAL VIEW OF PATIENTS' BLOCK. SOUTH FRONT, FROM THE EAST.

Photo: E. Dockree.



THE ADMINISTRATION BLOCK AND PRINCIPAL ENTRANCE.

Photo: E. Dockree.

*Photo: E. Dockree.*

DETAIL OF PRINCIPAL ENTRANCE.



Photo: E. Dockrill.

SOUTH ELEVATION OF THE ADMINISTRATION BLOCK, SHOWING BAY OF THE DINING HALL
AND CORRIDOR CONNECTING THE PATIENTS' BLOCK.

*Photo: E. Dockett.*

DETAIL OF NORTH FRONT OF PATIENTS' BLOCK.



Photo: E. Dochres.

THE MEDICAL OFFICERS' QUARTERS.



VIEW OF PATIENTS' BLOCK, SOUTH FRONT, FROM WEST WING BALCONY.

Photo: E. Deckert.



DETAIL OF CENTRE PORTION OF PATIENTS' BLOCK FROM THE SOUTH-WEST.

Photo: E. Duchrez.

*Photo: E. Dochree.*

SOUTH ENTRANCE TO PATIENTS' BLOCK.

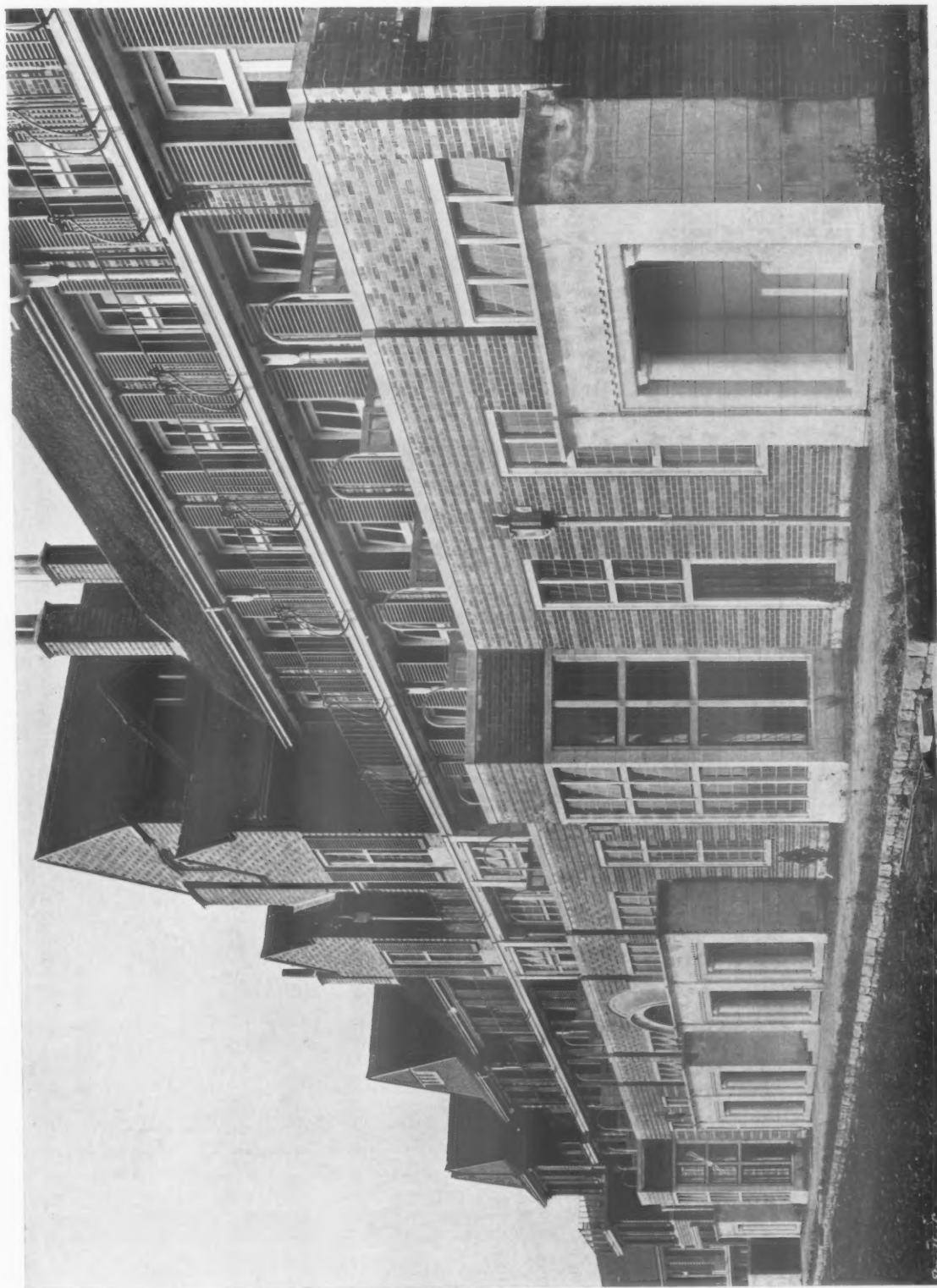


Photo: E. Doehrer.

DETAIL OF CENTRE PORTION OF PATIENTS' BLOCK, SOUTH FRONT, FROM SOUTH-EAST.

*Photo: E. De Vere.*

DETAIL OF WEST END OF PATIENTS' BLOCK.

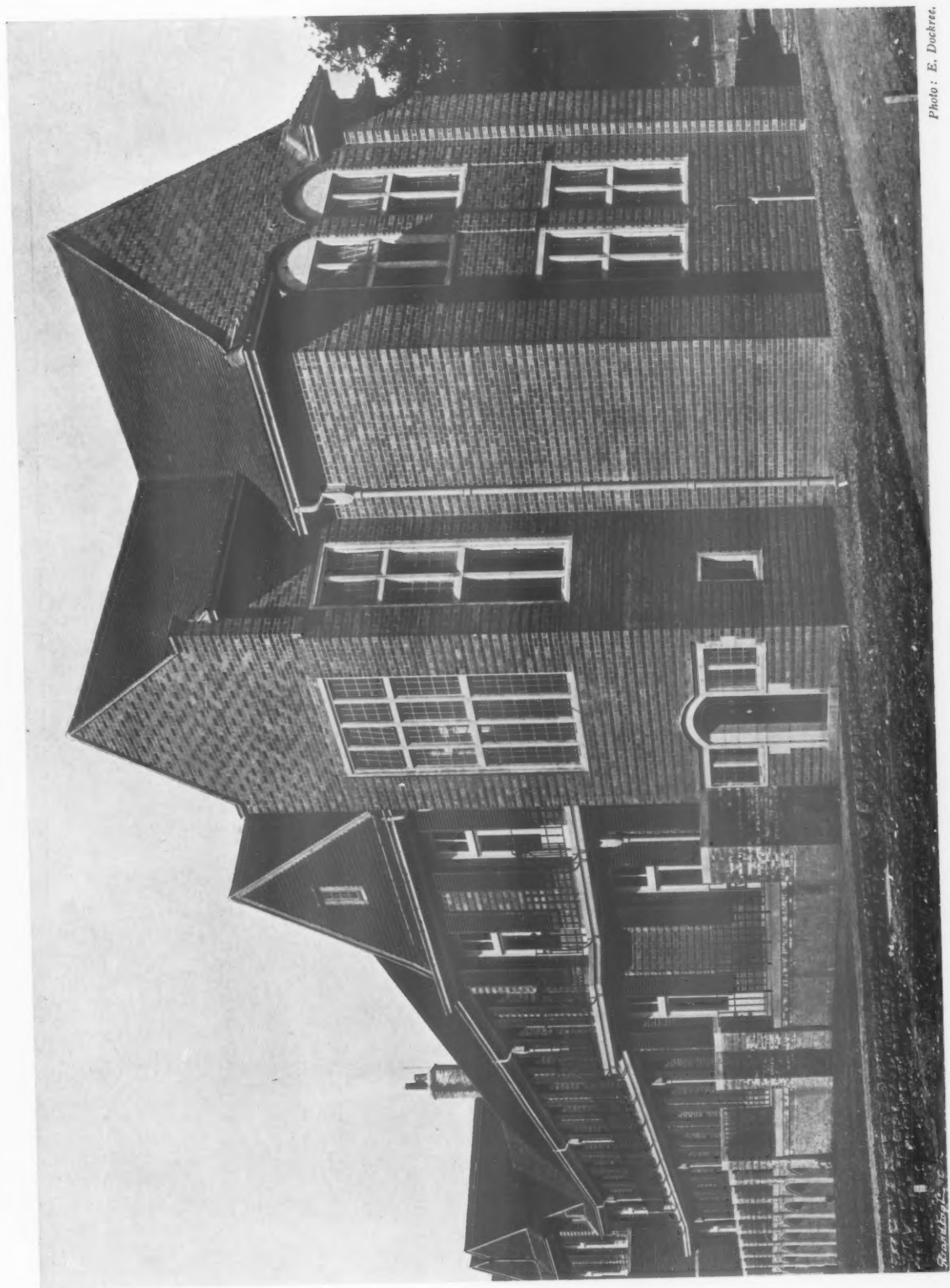


Photo: E. Dockree.

DETAIL OF EAST END OF PATIENTS' BLOCK.

*Photo: E. Dockree.*

ENTRANCE HALL, ADMINISTRATION BLOCK,
SHOWING FOUNDATION STONE.



Photo: E. Dickree

UPPER PART OF HALL, ADMINISTRATION BLOCK.



Photo: E. Doehra.

THE DINING HALL.



RECREATION ROOM.

Photo: E. Dockree.

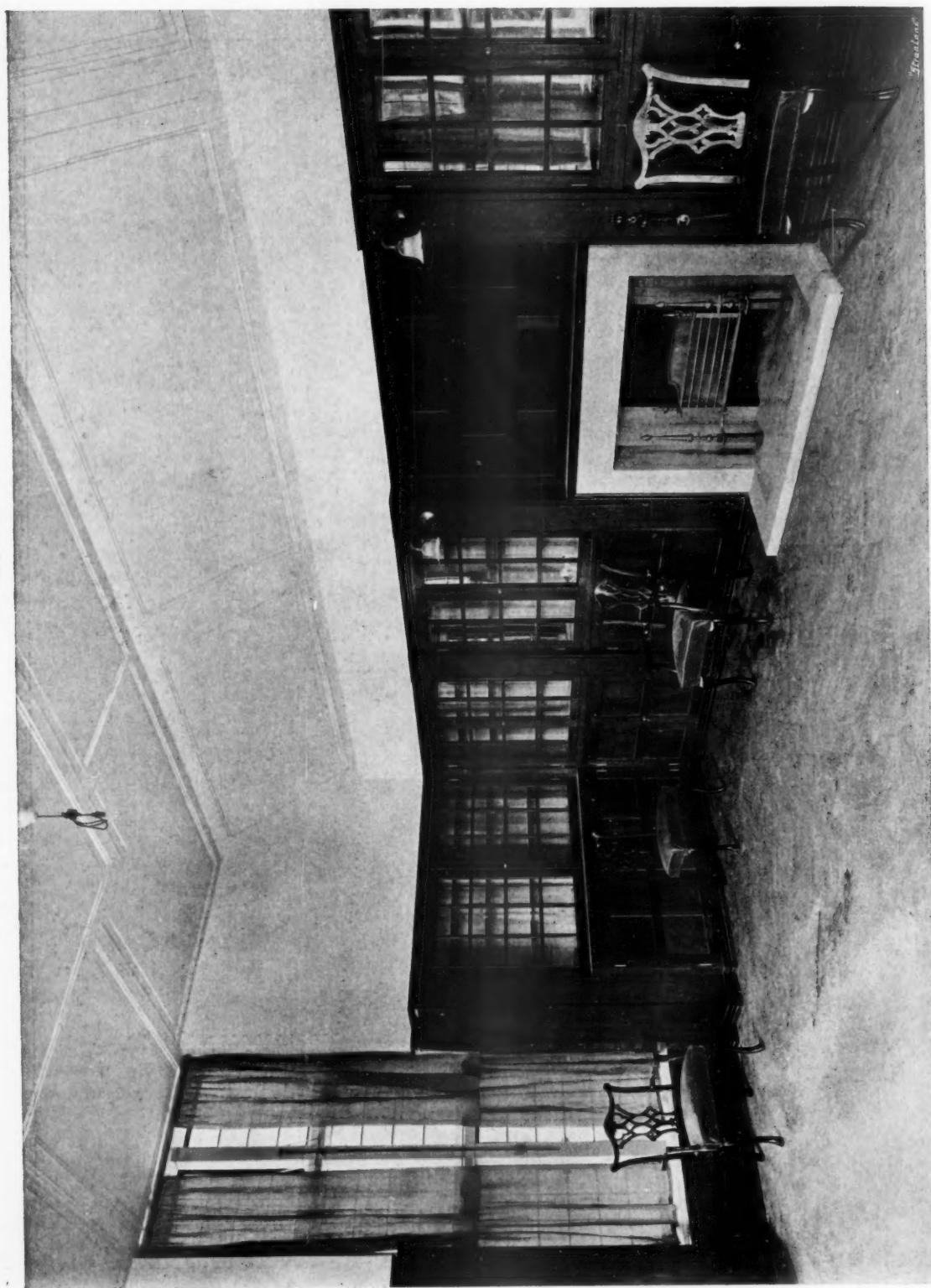


Photo: E. Decker

MEDICAL LIBRARY (MEDICAL OFFICERS' COMMON-ROOM).



Photo: E. Lockyer.

FIRST FLOOR LANDING, MAIN STAIRCASE



Photo: E. Dochter.

A PATIENT'S BEDROOM.



Photo: E. Dockree.

ONE OF THE HYDROPATHIC ROOMS (THERAPEUTIC BATHROOMS).

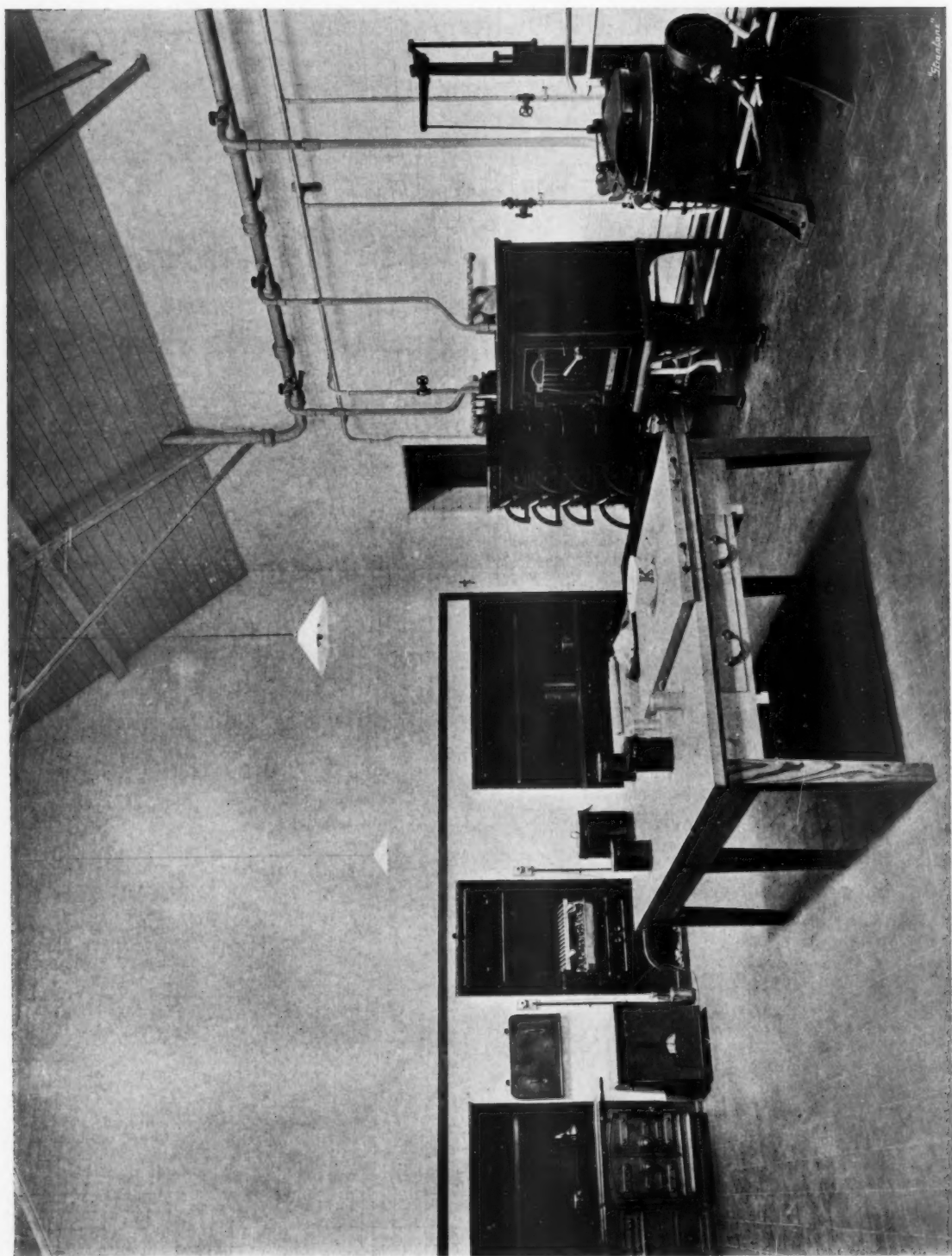


Photo: E. Dockree

THE KITCHEN.

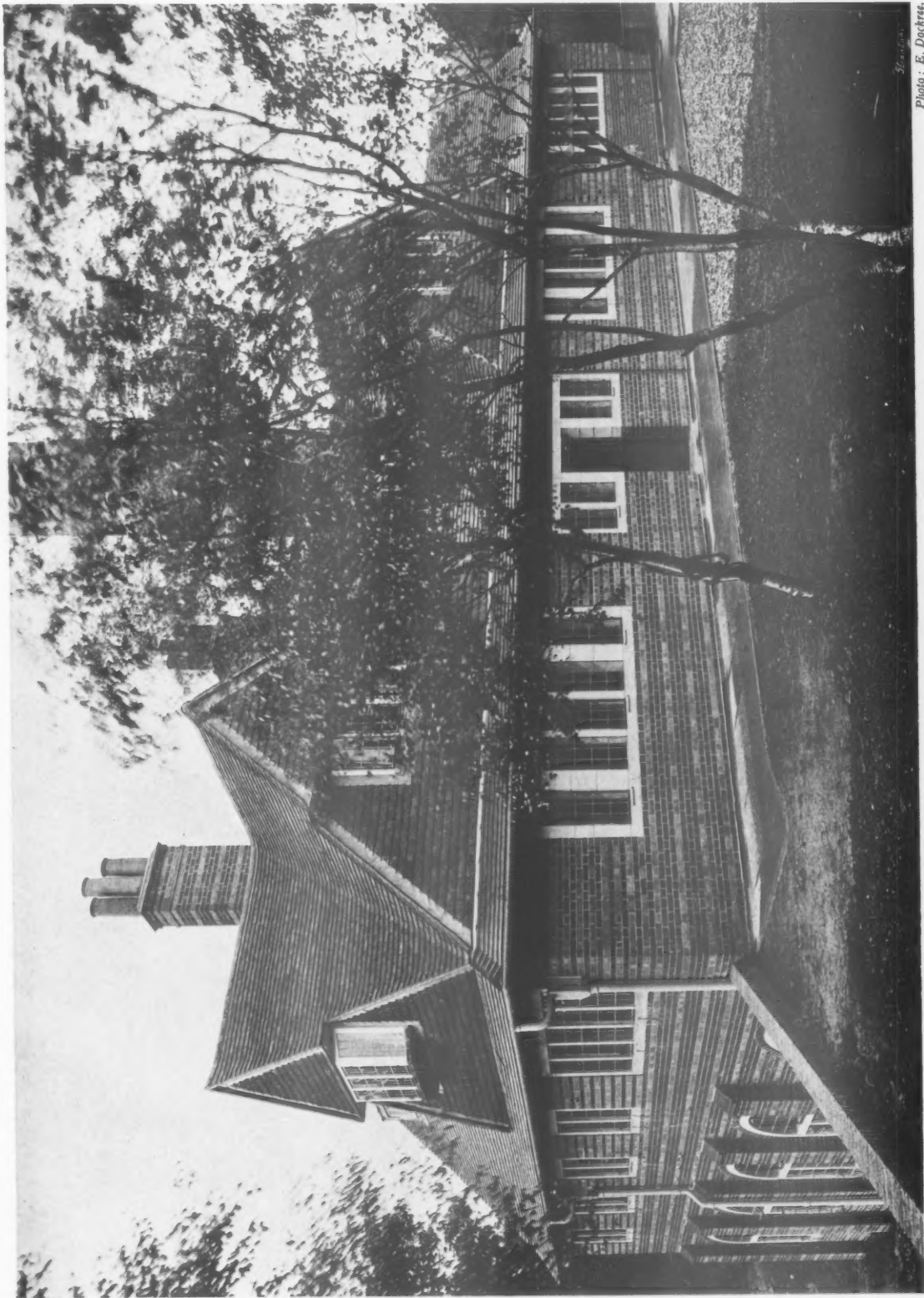
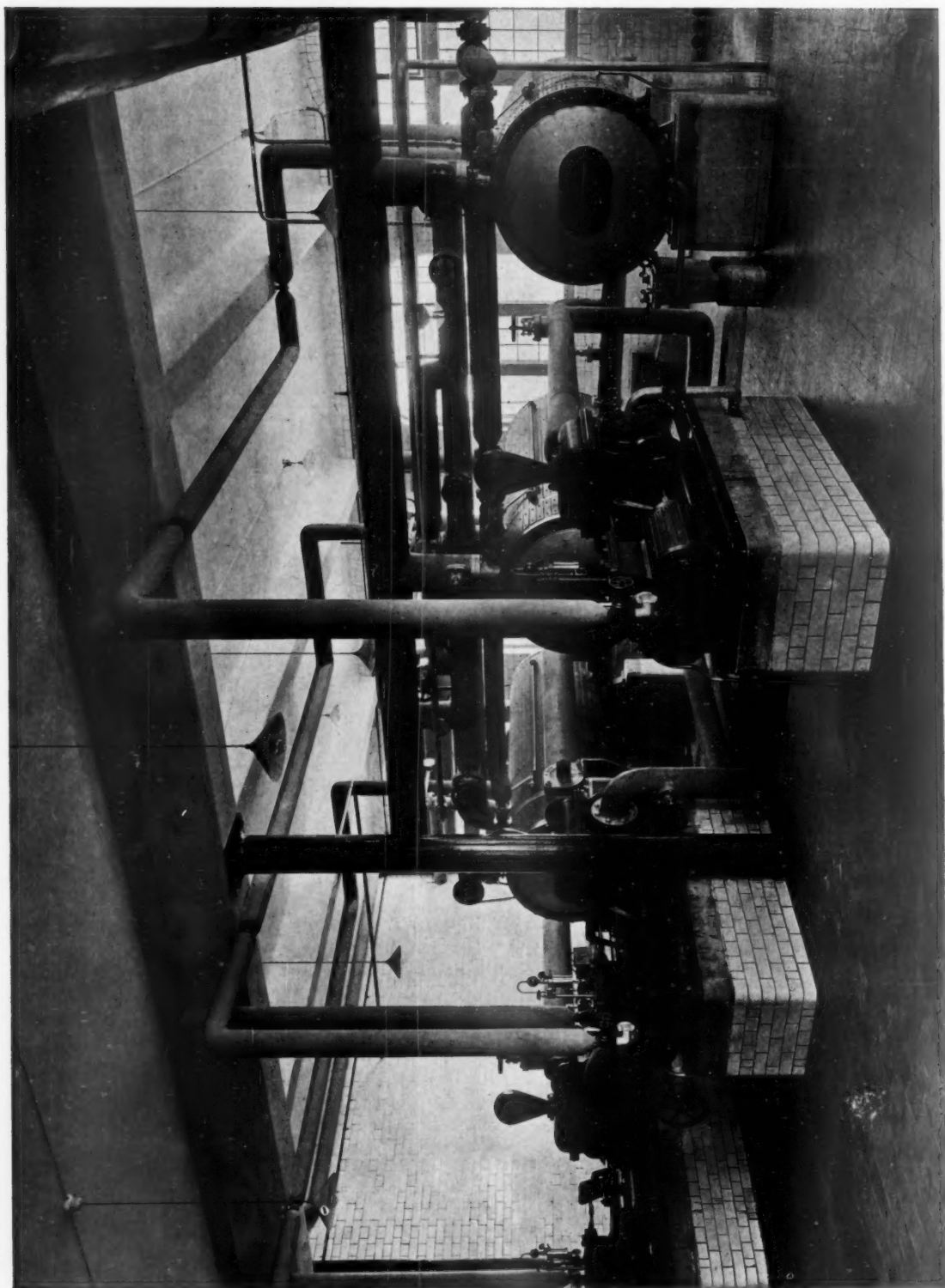


Photo: E. Dochres.

THE LAUNDRY AND ENGINE-ROOM BLOCK.

*Photo: E. Dockree*

THE BOILER ROOM.

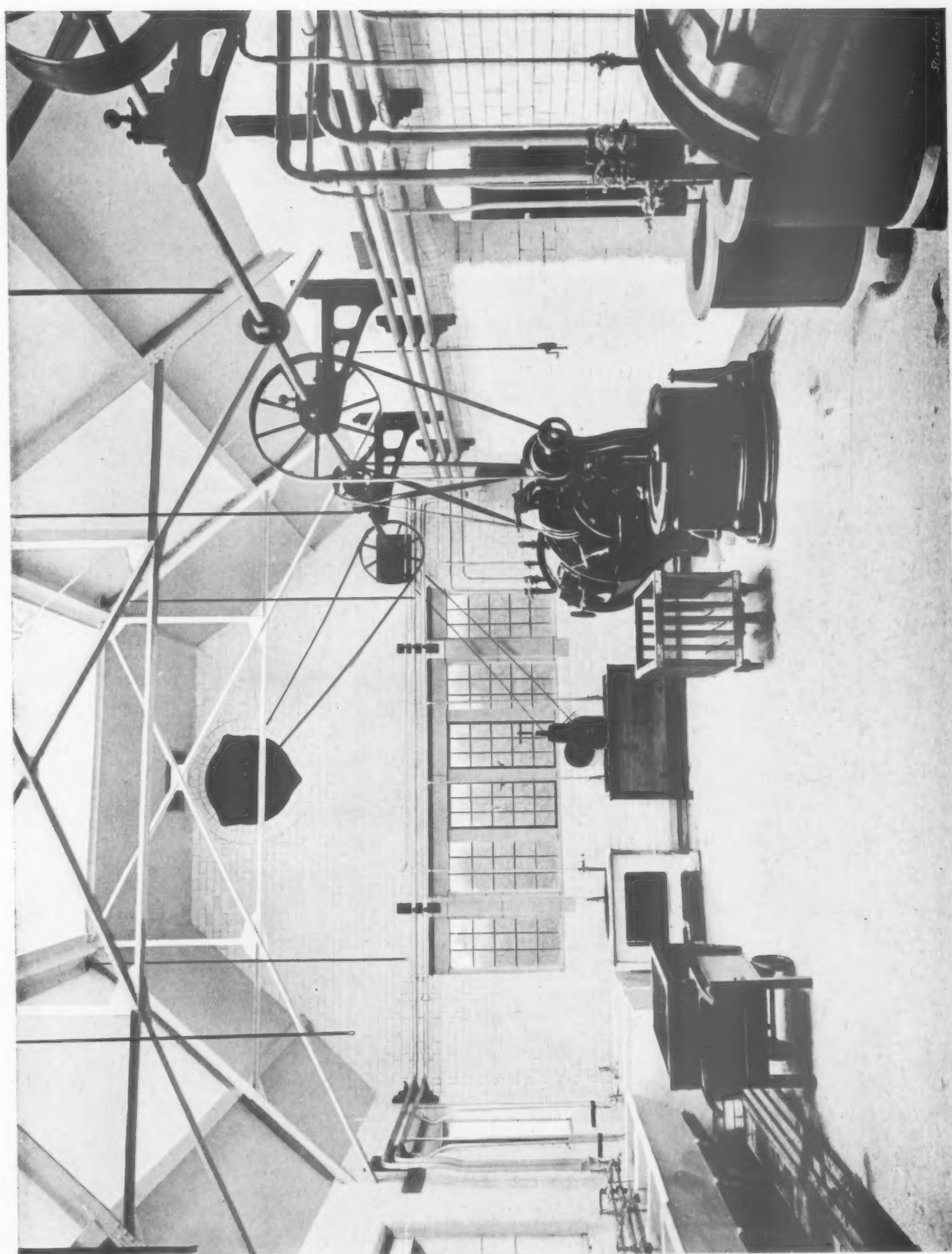


Photo: E. Dochet.

INTERIOR OF THE LAUNDRY.

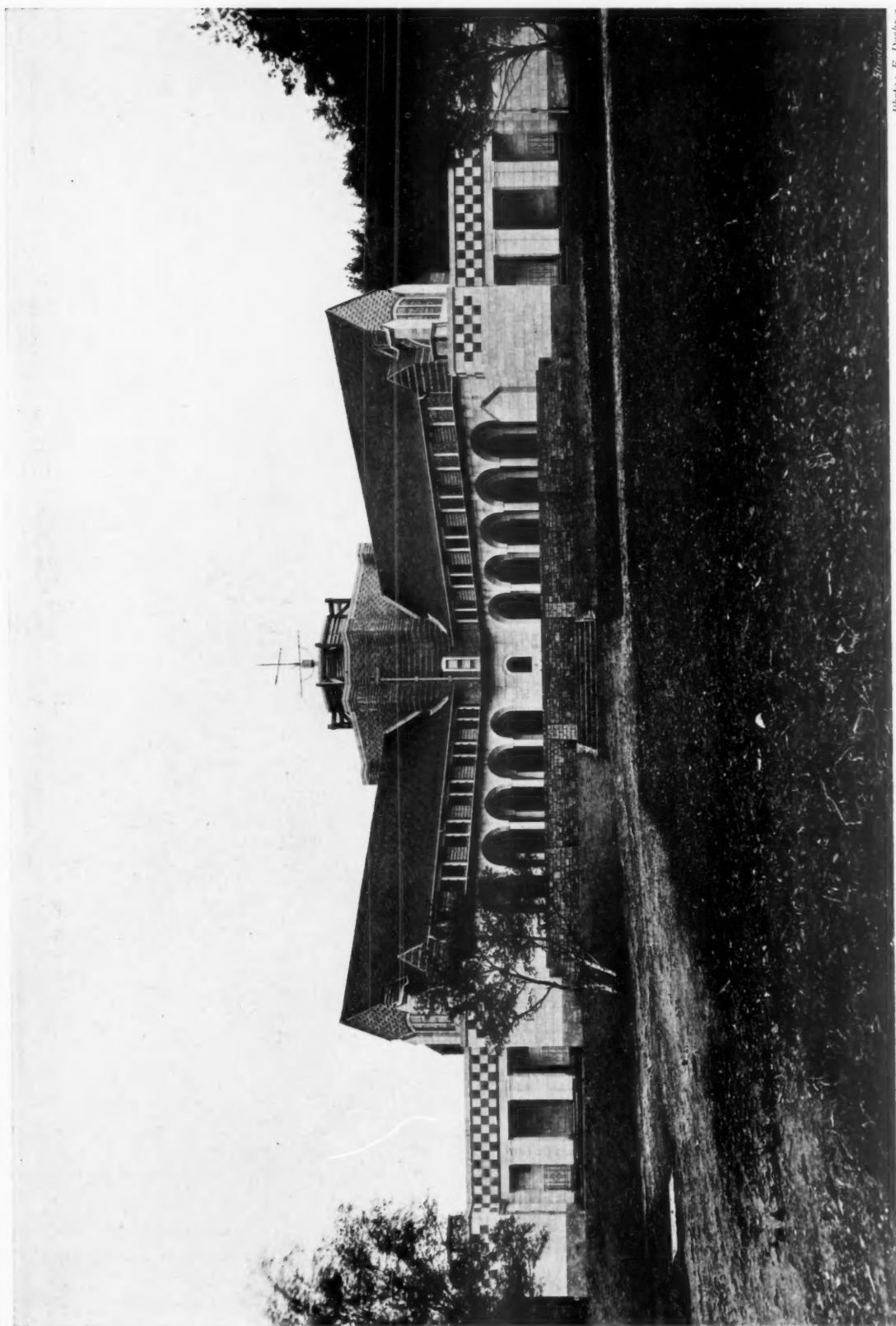


Photo: E. Doehring.

THE CHAPEL.

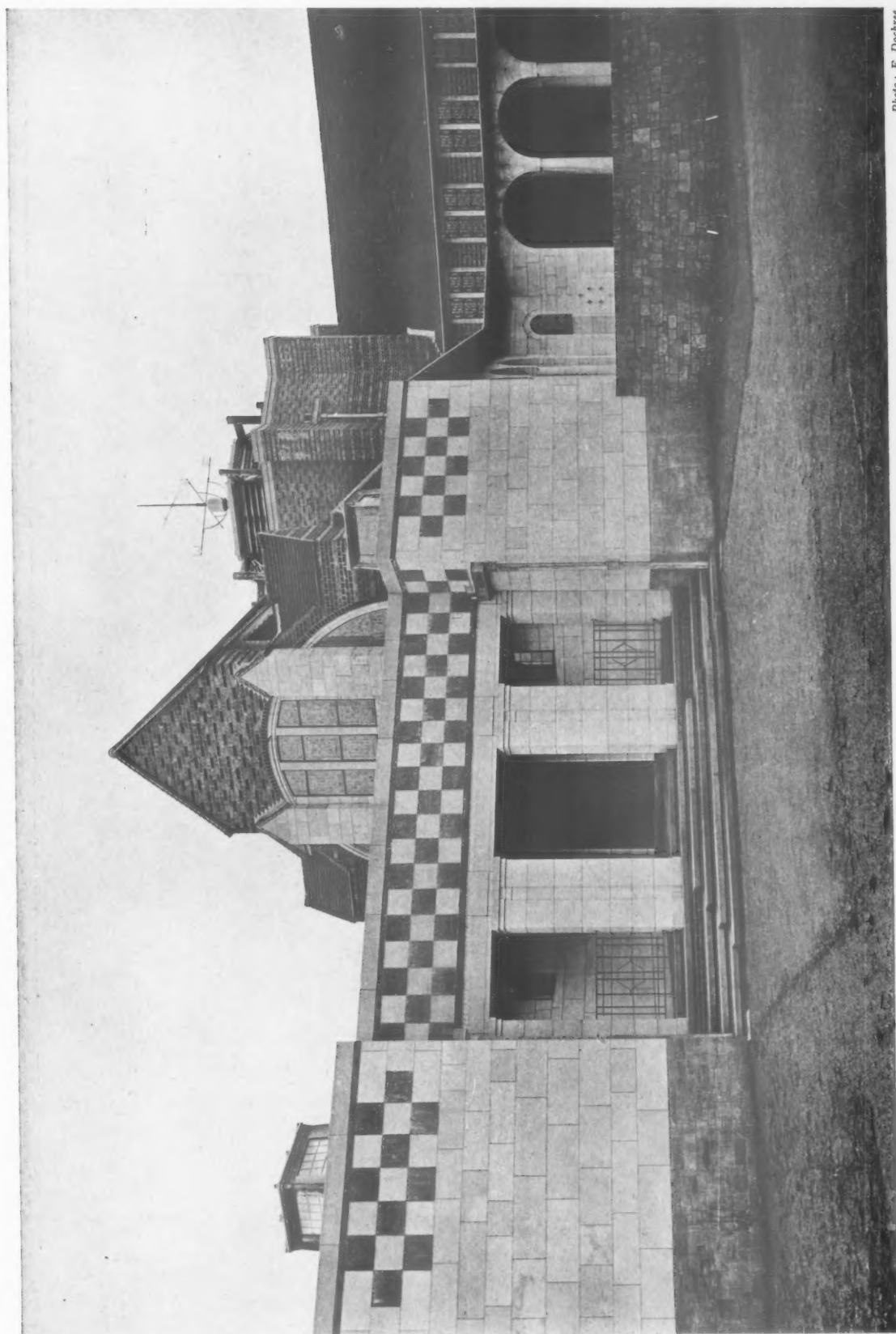
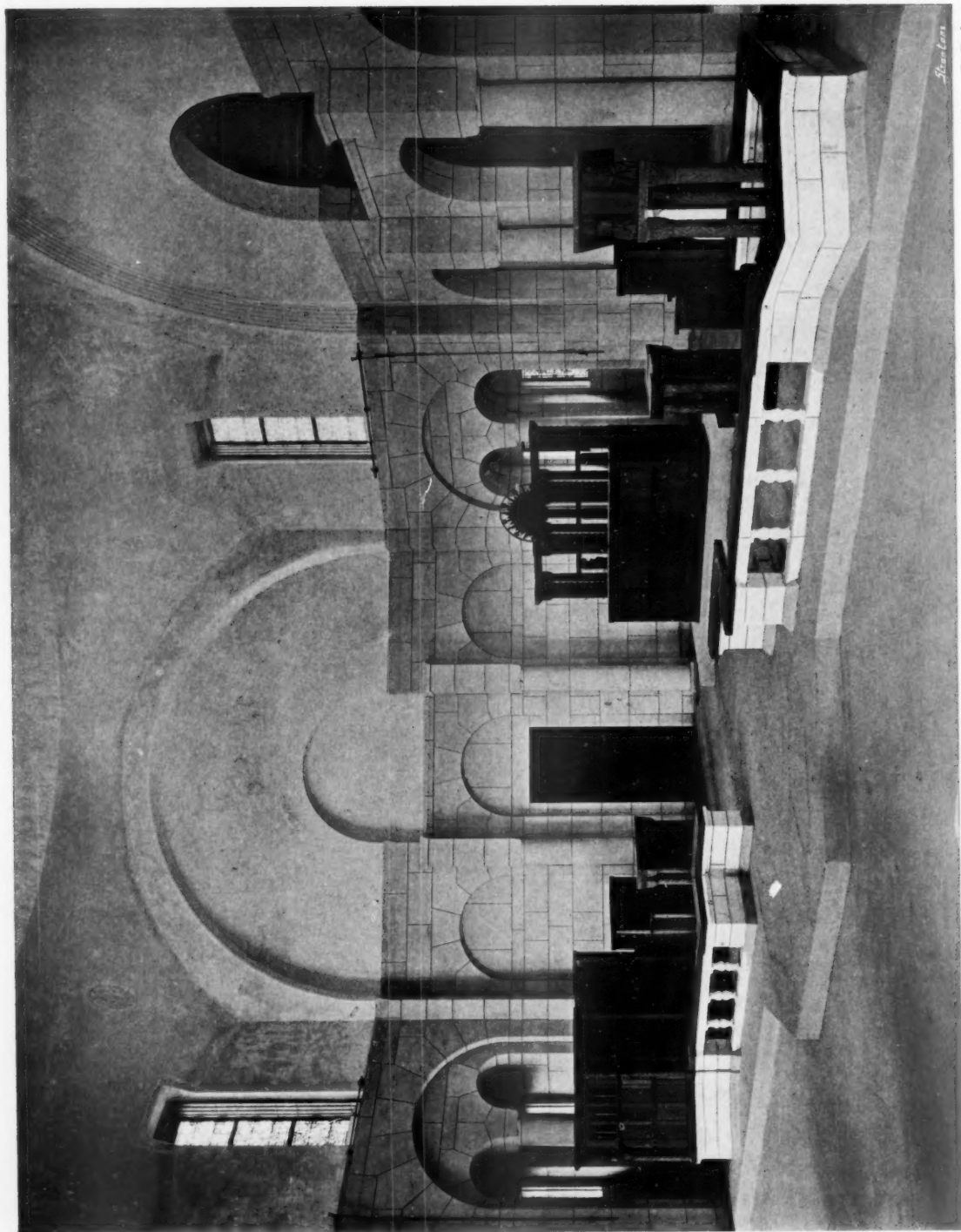


Photo: E. Dochree.

DETAIL OF ENTRANCE TO WEST AISLE OF CHAPEL.



THE CHANCEL OF THE CHAPEL.

Photo: E. Duching.

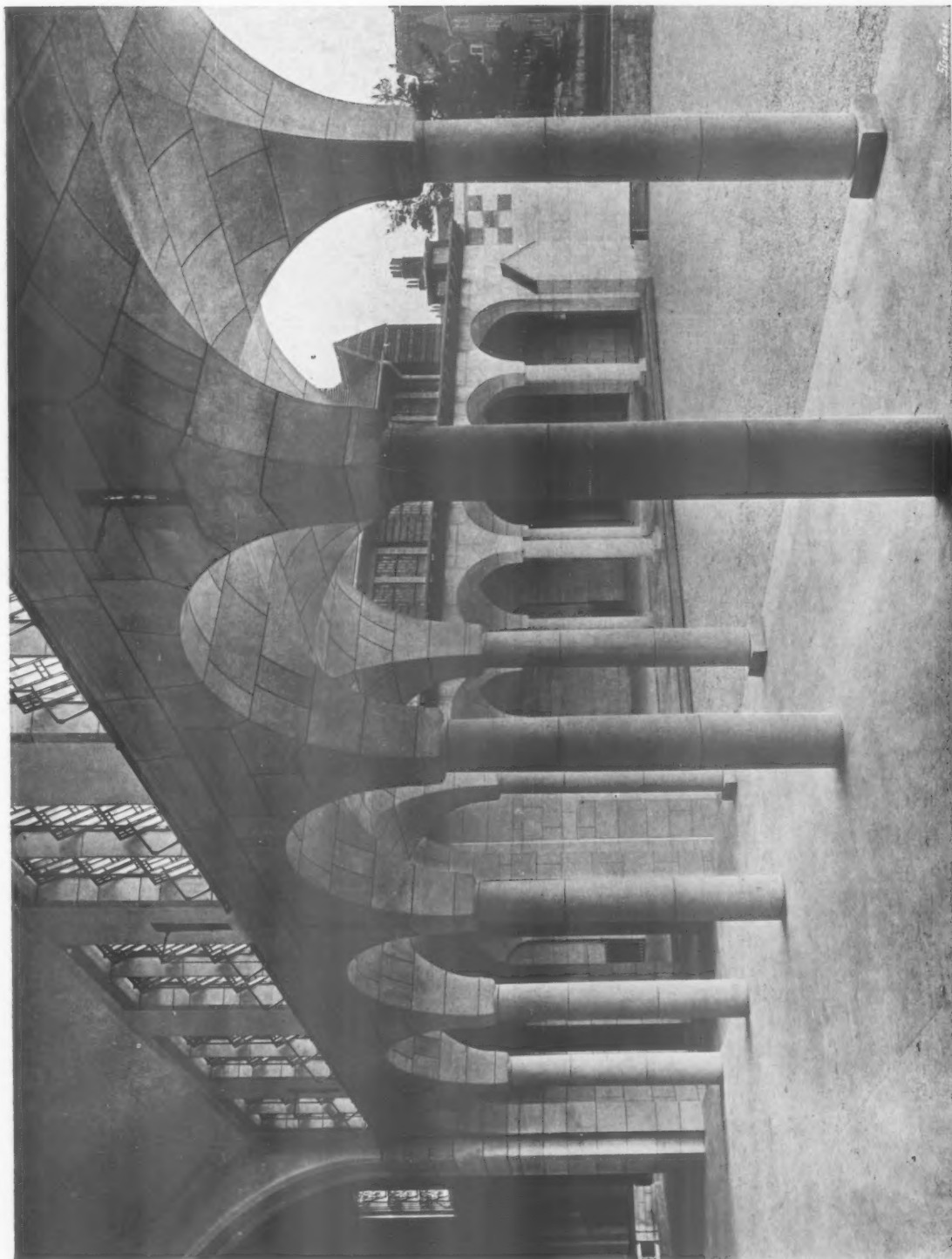


Photo: E. Dochres.

THE WEST AISLE OF THE CHAPEL, LOOKING INTO THE COURTYARD.



THE PUMP HOUSE.

Photo: E. Dochree.

